

BULLETIN No. 30.

U. S. DEPARTMENT OF AGRICULTURE,
BUREAU OF ANIMAL INDUSTRY.

D. E. SALMON, D. V. M., Chief.

TRICHINOSIS IN GERMANY.

Part I. GENERAL REMARKS ON TRICHINOSIS IN GERMANY.

By CH. WARDELL STILES, Ph. D.

Part II. A STATISTICAL REVIEW OF TRICHINOSIS IN GERMANY DURING THE EIGHTEEN YEARS 1881-1898.

By CH. WARDELL STILES, Ph. D.

Part III. EUROPEAN CASES OF TRICHINOSIS OF ALLEGED AMERICAN ORIGIN.

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Part IV. BIBLIOGRAPHY OF TRICHINOSIS IN GERMANY.

By ALBERT HASSALL, M. R. C. V. S.



WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1901.

ORGANIZATION OF THE BUREAU OF ANIMAL INDUSTRY.

Chief: D. E. SALMON, D. V. M.

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Editorial clerk: GEORGE FAYETTE THOMPSON.

Veterinary inspectors: ALBERT HASSALL, M. R. C. V. S.; JOHN R. MOHLER, A. B., V. M. D.

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LETTER OF TRANSMITTAL

U. S. DEPARTMENT OF AGRICULTURE,
BUREAU OF ANIMAL INDUSTRY,
Washington, D. C., July 13, 1900.

SIR: I have the honor to transmit herewith a report on Trichinosis in Germany, which has been prepared by Dr. Ch. Wardell Stiles, zoologist of this Bureau, who was detailed by yourself as agricultural attaché to the Embassy of the United States at Berlin during the years of 1898 and 1899, and to recommend its publication as Bulletin No. 30 of the Bureau of Animal Industry.

The object of Dr. Stiles's investigations was threefold: (1) To ascertain so far as possible the value of the microscopic inspection of pork products in Germany, as shown by German health statistics for 1881 to 1898, inclusive; (2) to ascertain whether any cases of trichinosis have definitely been traced to American pork having upon it the inspection stamp of this Bureau; (3) to investigate the charges brought in Germany against American meats.

The information contained in this report is from German sources, and to a large extent from official reports. It appears evident that a microscopic inspection is not the best method of securing immunity from trichinosis and that the outbreaks of this disease which have been charged to American pork have not been caused by pork from this country, or at the most are of doubtful origin.

Respectfully,

D. E. SALMON.
Chief of Bureau.

Hon. JAMES WILSON,
Secretary of Agriculture.



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TRICHINOSIS IN GERMANY.

SUMMARY OF REPORT.

PART I.—GENERAL REMARKS ON TRICHINOSIS IN GERMANY.

Historical summary of the discovery of trichinosis.—When trichinae were first discovered, it was not suspected that they were of importance to medicine, still less to international politics. First described in man (1835) in England; then in hogs (1847) in America; recognized as cause of disease (1860) in Germany (p. 9).

A knowledge of the *life history of the parasite* is necessary to understand the problems which arise. The parasites are transmitted only by use of raw or rare meat, chiefly pork, and cause the disease known as trichinosis (p. 10).

Various *preventive measures* have been proposed—public warnings, the cooking and curing of meat, and microscopic inspection (p. 11).

Objects of present report.—To judge the value of the microscopic inspection, as shown by German health statistics for 1881–1898, in order to inquire whether this system gives a protection proportionate to its expense, hence whether we should introduce it into this country; also to see whether any cases of trichinosis have been definitely traced to American pork bearing the inspection stamp of this Bureau, thus inquiring whether the attacks upon American pork printed in the German agrarian press have any foundation in German health and mortuary statistics (p. 12). The German law prohibits the sale of trichinous pork, regardless of the condition of the parasites, whether dead or alive.

International phase of subject.—American pork exported to Germany about thirty years ago. German decree of 1880 prohibited sausage and chopped meats (p. 15). Decree of 1883 prohibited all pork (p. 15). Decree of 1891 admitted American pork under certificate (p. 16), but did not provide that latter was a valid sanitary document. Prussian circular of 1892 calling for reinspection of American meats; this circular the beginning and source of trouble in Prussia (p. 17). Department of Agriculture changed its export inspection stamps (1893) and certificates (1896) (p. 19). Local restrictions. Position of two Governments summarized (p. 19). Further scientific discussion will not change the present situation, as the meat question has passed its scientific stage and is now a political and economic question (p. 20). United States Department of Agriculture refused (1898) certificate for fresh pork (p. 21). Secret Prussian circular (1898) to prevent United States consuls from obtaining information upon conditions of health and disease; its hygienic bearing (p. 21).

Local regulations.—Examples and discussion.

Number of trichina inspectors in Germany.—Divided into two classes, and variously estimated from 25,000 to 100,000. More than soldiers in the United States Army prior to Spanish-American war (p. 28).

Expense of trichina inspection in Germany.—Exact estimate impossible, but approximately at the rate of 1 mark (23.8 cents) per hog; annual kill, 14,000,000 hogs. At this rate would cost \$3,275,000 in addition to materials, rent, loss of meat, etc. Thus

the expense of a general inspection for either Germany or America would cost more than the entire present appropriation for the United States Department of Agriculture.

Over 200,000,000 pounds of American pork were exported to Germany during the fiscal years 1892-1898.

PART II.—A STATISTICAL REVIEW OF TRICHINOSIS IN GERMANY DURING THE EIGHTEEN YEARS 1881-1898.

Summary for the Empire (p. 35), giving general information and conclusions based upon the detailed statistics which follow.

The statistics given in this report are minimum figures, since, in common with all medical statistics, they represent cases reported, not cases diagnosed or undiagnosed.

Prussia.—Summary (p. 41). Detailed statistics by years and outbreaks (p. 43). Summary by districts (p. 99).

Saxony.—Summary (p. 133). Detailed statistics by years and outbreaks (p. 134).

German States, exclusive of Prussia and Saxony.—Summary (p. 144). Detailed statistics by summary, years, and outbreaks for Bavaria (p. 146), Brunswick (p. 147), Bremen (p. 149), Alsace-Lorraine (p. 150), Hamburg (p. 152), Lübeck (p. 153), and the rest of Germany (p. 153).

PART III.—EUROPEAN CASES ALLEGED TO HAVE BEEN DUE TO AMERICAN PORK.

List of cases, with references to discussion. It is shown that no evidence has as yet been presented in Germany to prove that a single case of trichinosis has ever been traced to American certified pork; while the evidence thus far presented in support of the claims that cases of trichinosis in Europe before 1892 have been traced to American pork is in some cases absurd, in others incomplete (p. 156).

PART IV.—BIBLIOGRAPHY.

Contains a list of the literature cited.

Acknowledgments.—The author is indebted to several persons for aid in the present work. He especially wishes to express his obligations to the members of the staff of the Surgeon-General's Library, who have been exceedingly kind in obtaining for him books which were otherwise inaccessible.

After all of the literature had been collected it was deemed advisable to have every reference verified, so far as possible, by some other person; and the author is indebted to Dr. Hassall, Mrs. Towne, Miss Tayler, and Miss Oberly for this work. It is believed that errors in bibliographic citation are thereby practically eliminated.

Acknowledgments are also due to Mr. Frank H. Hitchcock and Dr. A. M. Farrington for tables of exports given on p. 33.

Finally, but by no means least, the author wishes to express his appreciation of the courtesies extended to him in Berlin, Germany, by the Imperial health office and by the Royal library in permitting him to consult several published reports which could not be obtained in Washington.

Quotations.—It should be explained that where quotations are made they are usually given in the original German, with a translation or a short summary in English. The German is quoted for the simple reason that, if given in English alone, with many persons the question would arise in numerous instances whether the statements in English were not exaggerated purposely in translating. To protect himself, therefore, the author has felt it absolutely necessary to quote the original words of the authorities consulted.

Date of MS., April, 1900.

Part I.—GENERAL REMARKS ON TRICHINOSIS IN GERMANY (Stiles).

Historical summary of the discovery of trichinosis.¹—In 1835 Prof. Richard Owen described as, a new parasite of man, under the name *Trichina spiralis*,² certain small worms which were found by Paget, then a medical student, in a cadaver in a London dissecting room. At that time little or no importance was attached to the discovery, for the organisms were looked upon as zoological curiosities rather than as the cause of disease, while the idea that these worms would ever play any rôle in national sanitary matters or in international commerce or diplomacy was not even mistrusted.

Apparently the earliest cases observed in the United States of infection by this parasite were in the negro in 1841–42 by Professor Chazal, of Charleston, S. C., but the cases were not recorded until 1881 (Glazier, 1881, p. 173). The earliest published record for America seems to be the cases observed by Dr. Bowditch (1842, 1843, 1844), who found the parasites four times—twice in 1842, once each in 1843 and 1844—in muscles of human cadavers in Boston, Mass. Since then about 900 cases of the disease have been collected for this country.

In 1847 Prof. Joseph Leidy (1847), of Philadelphia, found the same species of worm in American pork.

Herbst (1851–52), an experimental physiologist in Göttingen, appears to be the first who experimented upon the life history of this parasite. In the summer of 1848 he found what he supposed to be trichinæ in the muscles of a dog, and fed the infected meat to a badger; when the latter died, in 1850, its muscles contained encysted worms. The badger meat was then fed to three young dogs, and seven weeks later two of them were examined and found to be trichinous. Herbst's ideas regarding the parasite were rather confused, however, and his views and experiments have been more or less ignored or forgotten.

Not until 1860 was the importance of the worm as a factor in pathology fully recognized, when Professor Zenker (1860, pp. 561, 562), of Dresden, showed it to be the cause of a disease which has since been named trichinosis, and which prior to Zenker's observations had been confounded with typhoid fever and other maladies. The brilliant observations and experiments of Zenker, Leuckart, Virchow, and others then placed the medical profession in possession of detailed

¹See also Cobbold (1866, p. 3027), who summarizes the disputed points regarding the early history of the worm.

²Now more properly known as *Trichinella spiralis*.

data concerning the life history of, and source of infection by, the parasites under discussion; also the symptoms, duration, and other clinical details of the disease, and the preventive measures to be adopted.

Then followed the noted years of 1860-1866, when certain European States, more particularly Prussia and Saxony, experienced a number of outbreaks of trichinosis. The medical and lay press of those years were filled with articles upon the subject, some authors advancing the wildest kind of speculation and showing almost a panic for fear of the malady; other authors went to the other extreme, claiming that the parasites were harmless, while the more thoughtful writers attempted to introduce safeguarding measures by which the public could be protected from infection.

Life history of the parasite.—A general idea of the life history of the parasite is necessary to a proper understanding of the source of infection, more particularly since certain erroneous ideas upon this subject have gained more or less credence. Briefly stated, the essential points to be held in mind are as follows: Three stages of the parasite are to be distinguished, namely, the embryo, the encysted larva, and the adult. The encysted larval stage has been encountered in the meat (muscles) of about twenty-five different mammals; it occurs most frequently in omnivorous and carnivorous mammals (man, hogs, rats, mice, cats, bears, etc.), and is found in the normally nonmeat-eating animals (cattle, hares, rabbits, gophers, etc.) only (*a*) when trichinous meat has been fed to them purposely, or (*b*) when from lack of other food these animals eat meat which happens to be trichinous, or (*c*) when they happen to eat a piece of trichinous meat accidentally. From present scientific data trichinæ may live in practically any mammal, but only the meat-eating mammals are at all likely to be found infected.

Trichinæ do not occur in any stage in any birds, reptiles, amphibia (frogs), fish, or invertebrates (insects, snails, etc.), except in isolated cases, where certain of these animals are subjected to infection under abnormal conditions in laboratories.

Since the encysted larva is the *infecting stage*, it will be seen that it is not necessary to take into consideration, from a point of public hygiene, any animals except the omnivorous and carnivorous, and from a practical standpoint the only ones, with isolated exceptions, which need be considered are man, hogs, rats, and dogs.

When any one of these animals eats any other one of them or one of its own kind (when a man eats pork, or a hog or dog eats a rat, for instance, or when a hog is fed on the offal of another hog) and the animal eaten happens to be trichinous, the conditions for infection, unless they have been guarded against, are present. If a hog eats a rat which is infected with live encysted larvæ, the latter escape from

their capsule, become adults within a few days, and multiply in the intestinal tract of the hog. Numerous embryos, which are born of the adults, wander to the muscles of the hog, where they develop into larvæ and become encysted. If now the hog is slaughtered and the meat eaten by a man without proper precautions (cooking or curing), the man in turn becomes infected.

This brief summary of the life cycle will suffice for the purposes of this report. Stress may, however, here be laid upon the following facts in order to correct popular errors: (1) *Trichinæ* can not develop in an animal unless the latter has eaten live trichinæ; (2) it is inconceivable that any animals may after death (as, for instance, after being slaughtered) become infected with trichinosis; (3) there is not the slightest danger of trichinosis from eating meat infected with trichinæ in case the parasites have been killed by thorough cooking or by thorough curing; (4) the presence of trichinæ *per se* can not be considered as a justification for destroying trichinous meat; it is only when the parasites are present in such enormous numbers that they have brought about extensive pathologic changes which in themselves would lead to the destruction of the meat that a sanitary official would be justified in destroying trichinous meat not belonging to him; in this case, however, it is the extensive pathologic alteration, and not the trichinæ, which should be considered; (5) the prejudice against eating trichinous pork which has been properly safeguarded (thorough cooking or thorough curing) is a pure sentimentality with no logical basis, for cooked or cured trichinæ are no worse than slaughtered hogs, broiled live lobsters, broiled oysters, or any other animal eaten in killed or semiliving (raw oysters) state; furthermore, the person who is prejudiced against eating properly safeguarded, slightly infected trichinous meat should, in order to be consistent, never touch any meat at all, for from 30 to 90 per cent of all hogs, according to locality, and many sheep, cattle, and horses are infected with other muscle parasites (*Sarcosporidia*) which are frequently even larger than trichinæ; (6) to eat raw pork at any time, or in any country, always involves a risk of infection with trichinosis, no matter whether the meat has been inspected microscopically or not.

Preventive measures proposed.—The measures proposed and adopted at various times and in various places looking to the prevention of trichinosis are essentially the following:

(1) Notices have been issued by sanitary boards and by the police calling attention to the danger arising from eating raw pork, and the public has been warned to cook the meat thoroughly before eating it.

(2) It has been shown that certain methods of curing pork kill the worms, and hence render the disease nontransmissible to man, and these methods have been adopted in some places.

(3) A system of microscopic inspection of slaughtered hogs has been

instituted. The diaphragm and other seats of predilection of the parasite are examined by persons especially trained in this work, and in case trichinæ are found the hog is condemned and disposed of according to the specific regulations in force. The regulations of some localities provide for the burial of the hog; of others, for its rendering; in a few cases (Spain) the meat has been thrown into the sea; and in some places the meat is first cooked or salted, and then sold. This inspection system, which originated in Germany, has now become quite general in that country—more particularly in Prussia and Saxony—and has extended in some degree to certain other parts of Europe—Austria, Denmark, and elsewhere; and scarcely a year passes that some American writer does not advocate its introduction into the United States, calling upon the Department of Agriculture to inspect microscopically all the pork placed on the American market.

Objects of the present report.—The writer originally had several objects in view in preparing a report upon the trichinosis of Germany. The study was undertaken partly in connection with the demand that the trichina inspection should be introduced into the United States and partly in connection with the diplomatic correspondence between Germany and America regarding the “American pork question.” One of the chief points in connection with the subject was a study of the local regulations in Germany regarding the trichina inspection.

In view of the pending legislation, however, it seems inadvisable to publish the report in the form first designed, for if, as is to be hoped, the Imperial meat-inspection bill is adopted in the near future a detailed discussion of the local regulations would be not only superfluous but would engender bad feeling and lead to a more critical condition than exists at present. As the local regulations may be expected to be matters of the past upon the enforcement of the proposed new law, it appears better to bury the mass of complaints against these regulations with the regulations themselves and begin on a new basis with the new law. Should the bill fail to pass, the local regulations may then be discussed.¹

However, since the American claims regarding local regulations have been much misunderstood, it may be well to refer to them briefly, giving a few examples (see p. 25).

Thus the original plan of the report has been somewhat changed, but there are certain grounds which lead to the present publication of a portion of the material collected:

First. In view of the demand referred to—namely, that the United States Department of Agriculture shall inspect microscopically all American pork before it is placed on the market—it is well to examine in detail the results of this system of inspection as carried on in Germany; and, taking into account its expense, to inquire whether it

¹ Note added in proof July, 1901: A compromise bill was finally adopted.—C. W. S.

is a practical system in public hygiene, giving a protection proportionate to its cost, or whether we can better protect ourselves against trichinosis by other methods, and use to better advantage for some other purpose the money required for a general microscopic inspection. In order to decide the question properly, the outbreaks of the disease in Germany for the eighteen years 1881-1898 have been studied in detail; the German outbreaks earlier than 1881 have also been compiled, but not with so much detail as the cases since that date. The American outbreaks thus far recorded have also been compiled and will be used in comparison.

Second. The question naturally arises whether the microscopic inspection can be guaranteed, either from a theoretical or a practical standpoint. Although this subject has often been discussed before, it is believed that a systematic study of the German outbreaks of trichinosis may throw additional light upon this point (which is frequently of legal as well as of hygienic importance), since it was in Germany that the system of microscopic inspection was conceived and nourished.

Third. There appears to be a systematic attack upon American meats carried on by certain German newspapers and individuals. It is repeatedly asserted that our pork is dangerous; that it is very likely to produce trichinosis; it has even been stated that trichinosis is the usual consequence of eating American pork; police and other local authorities publish warnings against our meats; in some localities persons selling American meats are compelled to display signs in their shops stating the origin of the goods; local regulations of alleged sanitary nature, but of a most exasperating character, are promulgated; butcher associations turn into amateur sanitary societies, and after discoursing at length upon the great dangers of "Yankee" products and the unheard-of frauds practiced by men who are pictured as almost criminal, they incidentally mention that American competition (while furnishing meat to the working classes) is injuring their own trade; American inspectors are accused of receiving bribes, etc.

It is not the intention to enter upon a polemic with the German newspapers, but rather to examine the questions: What true sanitary basis in German medical statistics can be found for these attacks? and Why is it that it is the butchers and certain politicians who have become so concerned about the alleged sanitary dangers connected with American meats while the German medical profession remains so quiet? ¹

¹An appeal to the German physicians has recently been made in a circular signed by a Hamburg butcher. It is rumored that this sensational circular was written by a certain lawyer who is a member of the anti-American element in the Reichstag.

The proposition for study may be expressed about as follows: How far do these newspaper polemics find support in the medical statistics? or, in other words, How many cases of, and deaths from, trichinosis in Germany have been definitely traced to eating American pork? How do these figures compare with the cases and deaths due to meat microscopically inspected in Germany and declared to be free from trichinæ? and How do the trichinosis statistics in Germany since the reintroduction of American pork (1892-1898) compare with the statistics for the years (1883-1891) when its importation was prohibited?

The inquiry is purely objective, hence it should offend no one. It must necessarily be based upon scientific and medical reports originating in Germany (for the most part official), and it is not clear how anyone in Germany can object to summarizing the subject upon German evidence. It pertains to the relations of an American product to the health of the German people, and it can not be expected that anyone in America will object to such a study if it is conducted in a proper spirit.

It may here be pointed out that there are two distinct points involved in connection with American-cured pork, namely: (1) Are trichinæ present in these goods? (2) If so, have these trichinæ proved dangerous from a standpoint of public hygiene? The first question will not be discussed at present, since it is somewhat foreign to the main issue. It is, in a certain sense, an important legal question from the German standpoint, for paragraph 367 of the German penal code provides that "*Whoever sells or offers for sale adulterated or spoiled drinks or edibles, especially trichinous meat, shall be fined not exceeding 150 marks, or punished by imprisonment.*" This law,¹ be it noticed, does not take into account the question whether the trichinæ are dead or alive—incapable or capable of reproduction—hence whether the trichinous pork is infectious or noninfectious. The law in question is not, therefore, entirely free from criticism when viewed from the standpoint of practical public hygiene.

The present bulletin deals primarily with the *practical hygienic side* of the subject, viewed in the light of experience as presented by German evidence; hence it is not the question as to whether trichinæ have been found which interests us at present, but whether experience has shown American pork in Germany to be an infectious and dangerous article of everyday food.

Trichinosis as an international question between Germany and America.—A detailed review² of this subject is not necessary for

¹ The Saxon law, on the other hand, permits the sale, under certain conditions, of meat when the hog is but slightly infected with trichinæ; the new draft of the Imperial law does the same.

² For some of the correspondence which has passed between the two Governments, see Foreign Relations of the United States for the years in question.

the purpose of this article. It will, however, be useful to the reader to bear certain dates in mind. Roughly speaking, the exportation of American pork to Germany began some thirty years ago. In 1880, Germany issued the following decree prohibiting our sausages and chopped meats:¹

We, William, by the grace of God German Emperor, King of Prussia, etc., decree in the name of the Empire, the assent of the Bundesrath having been obtained, what follows:

1. The importation of chopped or similarly and otherwise prepared pork and of all kinds of sausages from America is prohibited until further notice. The importation of entire hams and of sides of bacon is not included in this prohibition.
2. The Imperial Chancellor is empowered to permit exceptions to the prohibition and to provide for the measures of control thus rendered necessary.
3. This decree takes effect on the day of its promulgation.

(L. S.) (Signed)

WILLIAM.
VON BISMARCK.

In March, 1883, all American pork was excluded by the following decree:

Ordinance concerning the prohibition of the importation of pigs, pork, and sausages of American origin, of March 6, 1883.

We, William, by the grace of God Emperor of Germany, King of Prussia, etc., decree in the name of the Empire, and with the consent of the Bundesrath, as follows:

SECTION 1. The importation of pigs, pork (including bacon), and all kinds of sausages of American origin is prohibited until further notice.

SEC. 2. The Imperial Chancellor is empowered, by applying the necessary precautionary measures, to permit exceptions to be made to this prohibition.

SEC. 3. The ordinance of the 25th June, 1880, concerning the exclusion of American pork and sausages (Im. Law Gazette, p. 151) is abolished.

SEC. 4. The present ordinance goes into force after the expiration of the thirtieth day after its publication.

Given under our hand and the imperial seal.

(Signed)

WILLIAM.
VON BISMARCK.

BERLIN, March 6, 1883.

¹ Wir Wilhelm, von Gottes Gnaden Deutscher Kaiser, König von Preussen u. s. w., verordnen in Namen des Reichs, nach erfolgter Zustimmung des Bundesraths, was folgt:

1. Die Einfuhr von gehacktem oder auf ähnliche Weise zerkleinertem oder sonst zubereitetem Schweinefleisch und von Würsten aller art aus Amerika ist bis auf weiteres verboten. Auf die Einfuhr ganzer Schinken und Speckseiten bezieht sich das Verbot nicht.

2. Der Reichskanzler ist ermächtigt Ausnahmen von dem Verbote zu gestatten und die deshalb erforderlichen Controlmassregeln zu treffen.

3. Gegenwärtige Verordnung tritt mit dem Tage ihrer Verkündung in Kraft.

Urkundlich unter Unserer höchstehendenhändigen Unterschrift und begedrucktem Kaiserlichen Insiegel. Gegeben Bad Ems, 25 Juni, 1880.

(L. S.)

WILHELM.
VON BISMARCK.

By the decree of 1891, following the Saratoga convention, American hog products were readmitted with the understanding that the United States Department of Agriculture should inspect them microscopically before shipment.

The decree of 1891 reads:¹

Decree repealing decree excluding American pork.

We, William, by the grace of God German Emperor, King of Prussia, etc., decree in the name of the Empire, the assent of the Bundesrath having been obtained, what follows:

SECTION 1. The decree respecting the prohibition of the importation of swine, swine flesh, and sausages of American origin, of March 6, 1883 (Imperial Law Gazette, p. 31), ceases to be of force for living swine, as well as for such products as are provided with an official certificate stating the flesh has in the land of origin been examined pursuant to the rules in force there, and has been found free from qualities injurious to health.

SEC. 2. The Imperial Chancellor is empowered to adopt appropriate measures for the control of the character of the swine flesh imported from America.

SEC. 3. This decree enters into force on the day of its publication. In testimony whereof our own proper signature and the imperial seal are hereto affixed.

Done at Castle Schwareznau the 3d of September, 1891.

(Signed)

WILLIAM.
VON CAPRIVI.

The United States Department of Agriculture instituted a microscopic inspection; boxes or tierces containing goods inspected for trichinæ were provided with white stamps consecutively numbered. For a given number of stamps (5 to 50 or more, according to circumstances) a white "Certificate of inspection" was issued. These were

¹[REICHS-GESETZBLATT—No. 26.]

Inhalt: Verordnung, betreffend die Einfuhr von Schweinen, Schweinefleisch und Würsten amerikanischen Ursprungs, S. 385.

(Nr. 1975.) Verordnung, betreffend die Einfuhr von Schweinen, Schweinefleisch und Würsten amerikanischen Ursprungs, vom 3. September 1891.

Wir, Wilhelm, von Gottes Gnaden Deutscher Kaiser, König von Preussen, 2c., verordnen im Namen des Reichs, nach erfolgter Zustimmung des Bundesraths, was folgt:

SECTION 1. Die Verordnung, betreffend das Verbot der Einfuhr von Schweinen, Schweinefleisch und Würsten amerikanischen Ursprungs, vom 6. März 1883 (Reichs-Gesetzbl., S. 31) tritt für lebende Schweine, sowie für solche Erzeugnisse ausser Kraft, welche mit einer amtlichen Bescheinigung darüber versehen sind, dass das Fleisch im Ursprungslande nach Massgabe der daselbst geltenden Vorschriften untersucht und frei von gesundheitsschädlichen Eigenschaften befunden worden ist.

SEC. 2. Der Reichskanzler ist ermächtigt, zur Kontrolle der Beschaffenheit des aus Amerika eingeführten Schweinefleisches geeignete Anordnungen zu treffen.

SEC. 3. Gegenwärtige Verordnung tritt mit dem Tage ihrer Verkündung in Kraft. Urkundlich unter unserer höchsteigenhändigen Unterschrift und beigedrucktem kaiserlichen Insignel.

Gegeben Schloss Schwarzenau, den 3. September 1891.

(L. S.)

WILHELM.
VON CAPRIVI.

the same as the "Interstate certificates," except that they bore across their face in red ink the words "Microscopically examined in addition to regular inspection." The numbers of the stamps were given on the left margin of the certificate, so that the German customs authorities might control the boxes shipped under a given certificate. It was thought that this arrangement, made at great annual outlay by the United States Government and without any expense either to the exporter or the importer, would place the trade upon a firm foundation.

It should, however, be noticed that while the Imperial Government recognized the American certificates *as valid documents, on the basis of which American pork should be permitted to pass the German customs (after the duty was paid) no agreement was made by which any kingdom or local authority in the German Empire was obliged to recognize the American certificates of inspection as documents of sanitary value.*¹ This important point having been overlooked, no little surprise was caused among American officials when the following Prussian ministerial document appeared:²

¹Rusak, 1897, in his report for 1892-1894, R.-B. Stade calls attention to this fact. See p. 127 of the present report (italics).

²Cirkular an sämmtliche königl. Regierungs-Präsidenten und an den königl. Polizei-Präsidium in Berlin vom 21. Mai 1892, betr. die Untersuchung auf Trichinen der aus Amerika importirten Schinken und Speckseiten.

Durch die kaiserliche Verordnung vom 3. September 1891 (R.-G.-Bl., S. 385) ist das Verbot der Einfuhr von Schweinen, Schweinefleisch und Würsten amerikanischen Ursprunges für lebende Schweine unbedingt, für Schweinefleisch und Würste insoweit ausser Kraft gesetzt worden, als diese Erzeugnisse mit einer amtlichen Bescheinigung darüber versehen sind, dass man sie im Ursprungslande nach Massgabe der dort geltenden Bestimmungen untersucht und frei von gesundheitsschädlichen Eigenschaften befunden hat.

Bald nach dem Erlasse der Verordnung wurden von verschiedenen Seiten Zweifel aufgeworfen, ob sich nicht unter den aus Amerika eingehenden Sendungen von Schweinefleisch, wenn sie auch von vorschriftsmässigen Bescheinigungen begleitet seien, dennoch manche nicht untersuchte Stücke befinden möchten, und ob ausserdem die amerikanischen Zeugnisse auf volle Zuverlässigkeit Anspruch machen könnten. Die in Folge dessen an manchen Orten ausgeführten Nachuntersuchungen haben diese Zweifel als begründet erwiesen; in zahlreichen Fällen hat man hierbei amerikanische Speckseiten und Schinken mit Trichinen durchsetzt gefunden, die zum grossen Theil noch lebensfähig waren.

Unter diesen Umständen haben wir im Interesse der Gesundheitspolizei Ermittlungen über die Durchführbarkeit einer Nachuntersuchung des aus Amerika eingeführten Schweinefleisch u. s. w. angeordnet und sind dadurch zu folgendem Ergebnisse gelangt. Von der Nachuntersuchung amerikanischer Würste wird abzusehen sein; sie ist mit mancherlei Schwierigkeiten verknüpft, und hat über dies, selbst wenn sie mit grösster Sorgfalt erfolgt, nur geringen Werth zu beanspruchen. Ferner wird man von der Nachuntersuchung der etwa von den Seehäfen unmittelbar an die Konsumente vertriebenen amerikanischen Fleischwaren, und zwar schon aus dem Grunde Abstand zu nehmen haben, weil hiermit eine zu grosse Belästigung des Publikums verknüpft sein würde. Endlich könnte man allenfalls auch auf die Nachuntersuchung des aus Amerika der Regel nach in Fässern eingehenden Schweine-

Circular to all royal district presidents and to the royal police president in Berlin, May 21, 1892, regarding the inspection for trichinae of hams and sides of bacon imported from America.

By the imperial decree of September 3, 1891 (R.-G.-Bl., p. 385), the prohibition of the importation of swine, pork, and sausages of American origin is rescinded: For living swine, unconditionally; for pork and sausages, conditionally, in so far as these products are provided with official certificates, stating that they have been inspected in the land of origin according to the regulations existing there and have been found free from qualities which are injurious to health.

Shortly after the issuance of the decree doubts were raised from different sides whether there were not some uninspected pieces among the sendings of pork from America, although accompanied by proper certificates, and whether, further, the American certificates could lay claim to full trustworthiness. The reexaminations which were made upon this account in several places have proved these doubts to be well founded; in numerous instances American sides and hams have been found infested with trichinae, which were to a great extent viable.

Under these conditions, in the interest of the sanitary police, we have instituted inquiry as to the possibility of carrying through a reinspection of imported American pork, etc., and have come to the following conclusion: Reinspection of American sausages is to be omitted. It is accompanied with certain difficulties, and has, further, even when conducted with the greatest care, a claim to very little value. Further, the reinspection of the American meat wares which are delivered to the consumers directly from the seaports is to be omitted, since otherwise too great an inconvenience to the public would result. Finally, the reinspection of pickled pork imported from America, usually in tierces, and of pickled pig tongues, could be omitted, as these wares are eaten only when cooked.

On the other hand, it appears generally feasible, and it is urgently recommended, to subject to reinspection before they are sold to consumers all American hams and

pökelfleisches und der gepökelten Schweinezeugen verzichten, da diese Waaren nur in abgekochtem Zustande verzehrt zu werden pflegen.

Dagegen erscheint es allgemein durchführbar und empfiehlt sich dringend, die in den einheimischen Gross- und Kleinhandel gelangenden amerikanischen Schinken und Speckseiten ohne Ausnahme der Nachuntersuchung zu unterwerfen, bevor sie an die Konsumenten verkauft werden. Zu diesem Zwecke werden dort, wo die Untersuchung des Schweinefleisches durch Polizeiverordnung geregelt ist, deren Bestimmungen auf die in Rede stehenden amerikanischen Erzeugnisse anzuwenden oder deswegen in geeigneter Weise zu ergänzen sein. In denjenigen Regierungsbezirken, wo es an solchen Polizeiverordnungen fehlt wird man zu erwägen haben, ob es für angezeigt zu erachten ist, sie demnächst, vielleicht in der Beschränkung auf amerikanische Schinken und Speckseiten, zu erlassen, oder ob die Nachuntersuchung dieser Gegenstände auf anderem Wege gesichert werden kann.

Ew. Hochwohlgeboren wollen das hiernach Erforderliche, wenn und soweit es noch nicht geschehen sein sollte, gefälligst veranlassen.

Berlin, den 21. Mai 1892.

Der Minister des Innern:

HERRFURTH.

Der Minister für Landwirthschaft, Domänen und Försten:

VON HEYDEN.

Der Minister der geistlichen, Unterrichts- und Medizinal-Angelegenheiten:

Im Auftrage:

BARTSCH.

[Copied from: Ministerial-Blatt für die gesammte innere Verwaltung in dem königlich preussischen Staate, No. 7, Aug. '15, 1892, pp. 227-228.]

sides, without exception, which come into the domestic wholesale and retail trade. For this purpose, where the inspection of pork is regulated by police ordinances, the rules are to be applied to the American products in question or are to be changed so as to apply to them. In those districts where such police regulations are lacking the question is to be considered whether it is deemed expedient to issue such regulations, perhaps confining them to American hams and sides, or whether the reinspection of these articles can be insured in another way.

You will please cause the necessary steps to be taken, when and in so far as this has not yet been done.

Berlin, May 21, 1892.

(Signed) The Minister of the Interior:

HERRFURTH.

The Minister of Agriculture, Domains, and Forestry:

VON HEYDEN.

The Minister of Religious, Educational, and Medical Affairs:

BARTSCH.

Per order of—

This ministerial circular practically notified local Prussian authorities that they could promulgate such local restrictions against American meats as they saw fit, provided an alleged sanitary justification could be given, and it is not unreasonable to consider it the origin of the numerous local regulations which followed.

In 1893 the Department of Agriculture changed the color and form of the stamps intended to accompany microscopically inspected meats, adopting a violet color; in 1896 a violet certificate of special form and wording was adopted.

Since the Prussian circular of May 21, 1892, numerous local authorities, not only in Prussia but in other parts of Germany, have insisted upon reinspecting American meats imported under the American certificate, and these inspections and reinspections have given rise to frequent protests on the part of exporters, importers, and dealers, as well as to extensive diplomatic discussions between Germany and America. Summed up in a few words, the positions of the two Governments have been as follows: The American Government has maintained that these numerous local regulations were a serious restriction upon trade, a restriction which was not justified by sanitary arguments nor by Germany's sanitary experience with American meats. Germany's (imperial) position has been that the restrictions complained of were local, not imperial, regulations; that according to German law trichinous meat could not be sold; that trichinæ are frequently found in American meats which are imported under American certificates.

In 1897 the writer of the present report was detailed to visit Germany in order to investigate the alleged presence of trichinæ in inspected American meats. He remained for nearly two years, studying the subject in Germany and surrounding countries. During this time the questions at issue were discussed in all their bearings with various German authorities, and finally having convinced himself that further scientific discussion on his part would not change the diplo-

matic situation he reported this fact to his Government, and in the summer of 1899 he was instructed to bring his work to an end and to return to America toward the close of the calendar year.

Having now returned, he is still of the opinion that the further scientific discussion of the American pork question with Germany will not alter the situation. This is no longer a scientific question, but purely a political and an economic one. The imperial authorities have proposed an imperial meat-inspection law, in which the sanitary arguments advanced by the United States Government are fully recognized. The Reichstag has attacked the draft of this bill as not being sufficient to meet the problems involved. Thus we have this position: *The Bundesrath has sanctioned the sanitary measures admitted by the active and the advisory sanitarians of the German Government, while the Reichstag attacks these sanitary measures as insufficient;* while, in reply, a representative of the Imperial Government has intimated, in language¹ which can not be misconstrued, that the position taken by certain members of the Reichstag appears to be actuated by motives which are not purely hygienic.

The writer desires to express his conviction that the Imperial authorities have endeavored to act with perfect fairness in connection with this new law and with a due consideration of the hygienic necessities in Germany. Newspaper attacks, to the contrary, are, in his judgment, prompted by other than purely sanitary motives. The draft of the bill, as adopted by the Bundesrath and presented to the Reichstag, is one of the ablest and most thorough sanitary documents ever presented to a legislative body. If it were to become a law, and that law supported by equally fair regulations, administered in an unbiased manner, the present numerous complaints regarding the restrictions upon trade would become matters of past history. While it is not the intention of the writer to discuss the bill in detail at this time,

¹“Now I must state—and I do this with regret—reasons were in some instances brought forward which created the impression as though we were not speaking on a law for the protection of the German people, but on a part of the new duty tariff—the duty to be paid on meat and meat products. [‘Very true.’] It has been especially stated by one of the speakers that we can ourselves supply the meat demand in Germany and must try to rid ourselves of the inferior foreign meat. This law, it is true, is not the *sedes materiae* for this. Differences in the cost of production of various countries can only be equalized by passing customs laws. If we were to place ourselves on the standpoint of trying to prohibit the introduction of goods which we manufacture in sufficient quality and quantity, this would certainly invite similar measures on the part of other countries. In this manner we could totally exclude an exchange of goods with other people [‘Very true,’ on the left], and I believe that we should not then have to worry in regard to the future formation of our commercial relations, as we are now doing. [Hearty applause on the left.] Gentlemen, I believe that if prohibitions are placed on goods imported from other States, it is necessary, in the first place, that we do not at such a time need those foreign goods, and it must furthermore plausibly be proven that these goods are dangerous to health.”—Count Posadowsky-Wehner, Imperial Minister of the Interior.

still, from the standpoint of a sanitarian interested in *international* hygienic matters, he can only express his regret that the draft in question does not contain a provision that *all imported meats must be accompanied by a certificate issued by the central Government of the land in which said meats are slaughtered and dressed, and stating that officials of said exporting land had inspected the same both before and after slaughter, and had not found them infected with any disease which would render them dangerous as food.*

Such a provision would greatly strengthen the bill, and would do away with many swindles which to-day tend to support a dishonest traffic. As justification for expressing this opinion, the writer advances the statements (1) that he is reporting to his own Government, not to Germany; (2) that he is reporting upon a subject which lies within his province; (3) that from the standpoint of the sanitarian it is an error to claim that the bill in question is *strictly* an internal German affair; it is, on the contrary, an important international hygienic matter, in regard to which every sanitarian may take a legitimate interest and express an opinion.

Two further official acts deserve a moment's notice. In the summer of 1898, the United States Department of Agriculture prevented the further exportation of fresh pork from this country to Germany. The sanitary reason for this action is apparent to anyone who has followed closely the history of trichinosis.

Shortly before the return of the writer from the German capital to Washington an incident occurred which stands out in bold relief when compared with the straightforward action of the Imperial German authorities. Reference is made to the following order which accidentally became known beyond the circles for which it was intended. It appeared in substance in one of the American newspapers, but at that time attracted little attention; later it was read in the Reichstag by one of its members, and was afterwards printed in full in one of the German newspapers, and commented upon widely in the press of both countries:¹

[The district president. C. B. 2323.]

DÜSSELDORF, July 24, 1899.

According to a circular of June 11, 1894 (Ministerial Journal for Internal Administrations, 102), inquiries and requests which are directed to German administrative authorities by consuls of foreign States, stationed in Germany and provided with exequatur, so far as lies within their (the consuls') official duties and within their official district, may be answered by these (German officials) directly, in so far as the

¹ [Der Regierungspraesident. C. B. 2323.]

DÜSSELDORF, d. 24. Juli 1899.

Nach einem Circulare vom 11. Juni 1894 (Ministerialblatt fuer innere Verwaltungen, 102) koennen Anfragen und Ersuchen, welche seitens der in Deutschland bestellten und mit dem Exequatur versehenen Konsuln auswaertiger Staaten innerhalb der Grenzen ihrer amtlichen Aufgaben und ihrer Amtsbezirke an die diesseitigen Verwaltungsbehoerden gerichtet werden, von diesen unmittelbar beantwortet

questions are not matters of general policy (importance). Toward the American consuls, for whom the foregoing principles are also valid, all communications are, however, to be avoided which are likely to work against German interests, immaterially whether their desire for information bears upon questions of general policy (importance) or not. In cases of doubt an answer is at first not to be given, and report to be made to me. As information which under no circumstances is to be given to American consuls, I designate, for instance, statistical data regarding violations of the Imperial food law (Nahrungsmittelgesetz) and its supplementary laws, especially regarding the manufacture of and trade in foods and edibles which are injurious to health, including toys, regarding adulteration (falsification) of and trade in such wares, and the trade with such adulterated (falsified) wares, regarding (the finding of) trichinae and cysticerci in native meat, and regarding the status of diseases in man and animals. Whenever the questions for information touch the last-named points, there is, however, no objection (hesitation) for German officials to refer to the regular statistical reports in the "Veroeffentlichungen des Kaiserlichen Gesundheitsamtes." No further material is, however, to be furnished.

I request you to treat this matter as *strictly confidential* and to provide the officials under your charge with appropriate instructions, laying particular stress on the strictly confidential treatment.

A communication of this order to the mayors through simple repetition of this in copy is not to take place. You are rather to act by giving special orders.

(Signed)

FREIHERR VON RHEINBABEN.

To the LAND COUNCILORS AND HEAD MAYORS.

Favors to American consuls are to be avoided, and in all cases not free from doubt report is to be made to the district president. A. G. I.

DISTRICT PRESIDENT.

werden, sofern es sich nicht um Fragen von allgemeiner Bedeutung handelt. Gegenueber den amerikanischen Konsuln, fuer welche die vorangesetzten Grundsätze gleichfalls Geltung haben, ist indessen von allen zur Beeinträchtigung diesseitiger Interessen geeigneten Mitteilungen abzusehen, gleichgueltig ob deren auskunftbegehren Fragen von allgemeiner Bedeutung treffen oder nicht. In Zweifelsfaellen ist von einer Antwort zunaechst abzusehen und er an mich zu berichten. Als Mitteilungen, die unter keinen Umstaenden den amerikanischen Konsuln zu machen sind, bezeichne ich beispielsweise statistische Angaben ueber Zuwiderhandlung gegen das Nahrungsmittelgesetz und seiner Nebengesetze, insbesondere ueber die Herstellung und den Vertrieb gesundheitsschaedlicher Nahrungs- und Genussmittel und Verfaelschung und den Vertrieb derartiger Waaren und den Vertrieb derartiger verfaelschter Waaren, ueber Trichinen und Finnenfunde, in einheimischem Fleisch und ueber den Stand von Menschen- und Tierkrankheiten. Es besteht jedoch kein Bedenken, wenn die Anfragen ueber die letztbezeichneten Punkte die um Auskunft ersuchten diesseitigen Behoerden auf die regelmaessigen statistischen Mitteilungen in den "Veroeffentlichungen des Kaiserlichen Gesundheitsamtes," verweisen; eine Beschaffung weiteren Materials hat indessen zu unterbleiben.

Ich ersuche diese Angelegenheit als *streng vertraulich* zu behandeln und die nachgeordneten Behoerden mit entsprechenden Weisungen unter ausdruecklicher Betonung der streng vertraulichen Behandlung zu versehen.

Eine Mitteilung dieser Verfuegung an den Buergermeister durch einfache Kenntnissgabe derselben in Abschrift hat zu unterbleiben; es ist vielmehr im Wege besonderer dortseitiger Verfuegung su verfahren.

(Gez.)

FRHR. V. RHEINBABEN.

AN DIE LANDRAETE UND OBERBUERGERMEISTER.

Entgegenkommen gegen amerikanische Konsuln zu vermeiden und in allen nicht zweifelfreien Faellen an Regierungspraesident zu berichten. A. G. I.

REG. PRAES.

It is not the intention of the writer to discuss this order from a diplomatic standpoint, but it has been his unpleasant duty to call the attention of the Department of Agriculture to the following points in connection with it:

(1) The discussion of any hygienic problem connected with Prussia is, in view of the existence of this document, attended with serious restrictions and difficulties.

(2) Should an outbreak of trichinosis or other disease occur in Prussia and be attributed to American products, it would be impossible for American consuls to make an objective investigation of the subject.

(3) Only such sanitary information in Prussia is now accessible to us as has percolated through the Prussian officials, and we are therefore reduced to accept (or reject) whatever statements they choose to make.

(4) This document amounts to a Prussian governmental support, countenance, or protection of the manufacture of articles of food or of use which may be dangerous to health, provided those articles are intended for export to the United States.

(5) It is practically impossible, with this order in existence, to carry out the conditions imposed in connection with the importation of animals from Germany to the United States.

(6) The document in question prevents American officials, no matter how friendly their feelings toward Germany may be, from admitting that action in Prussia toward American meats is governed by a purely objective consideration of sanitary data.

(7) The reference to the "Veröffentlichung" of the Imperial health office can not be accepted as lessening the objectionable features of this order, since that publication contains statistics which are usually too brief and incomplete to supply the information we desire, and since these statistics appear from a week to several years after the cases of disease occur.

Local regulations.—No one can attack the principle that governmental authorities not only have a right but a duty to take such steps as are necessary to prevent the spread of disease. Whether any given steps taken are "necessary" or justifiable from a purely theoretical or a practical hygienic standpoint, is a question which one can always legitimately discuss, and such discussion must be based both upon general principles and upon the special conditions existing in the districts to which the regulations apply.

From a practical standpoint, we should start out with the view that any sanitary regulation which unnecessarily restricts trade is unjustifiable; not only is it calculated to work undeserved hardships to the parties concerned, but it has a decided tendency to bring public sanitary regulations into contempt; it makes enemies of the very men

whose cooperation and friendly feeling should be secured, and it has a decided tendency to force the trade out of the hands of honest merchants into the hands of men with a less regard for straightforward dealings; it furthermore sets a premium upon dishonest trade.

As a special condition which should be borne in mind in connection with the meat question in Germany, we must not lose sight of the fact that there exists in certain parts of that Empire the exceedingly dangerous custom of eating pork raw. Now, if it is impossible to change this custom, or if there is no disposition to do so, it can not be considered surprising that the authorities in the districts in question should feel themselves called upon to lessen the dangers involved by appropriate precautionary measures.

Germany's right to compel a microscopic inspection of pork to be consumed by the people of a given district in order to prevent trichinosis is, in the abstract, a matter which concerns Germany alone. When, however, the hygienic restrictions imposed appear unnecessarily severe, when they lead to continued protests from honest dealers, when they further appear to be unsupported by any practical experience, it can hardly be expected that interested parties will look upon them as resting upon purely sanitary motives.

The local regulations in Germany would fill several good-sized books. They may all be summed up by describing them as consisting of every degree between such regulations as command the respect not only of sanitarians, but also of honest dealers, and regulations which are exasperating to the dealer and incomprehensible to the sanitarian.

Since these regulations vary according to locality, and since the different localities frequently amend them, the wholesale dealer finds that not an inconsiderable portion of his time is occupied in trying to keep himself informed regarding the police requirements of various towns.

One of the most interesting points in connection with this subject is the question of the frequent reinspections in Germany. If, for instance, a sending of meat has once been inspected in Germany, in addition to the inspection it has received in America, and if it then be shipped to another town, should it again be reinspected there? Take the following case, which came under my observation: A wholesale dealer (A) in Halle a. S. imported a sending of American pork and placed it in his warehouse; he later sold the goods to a smoker (B) in Gera-Reuss; B wished to smoke the meat and sell it to a retail dealer (C) in Dresden. Although these goods were *only in storage* in Halle, the police compelled their microscopic reinspection by a duly authorized inspector before A was permitted to ship them to B. The police in Gera would not recognize the Halle inspection as valid because it was not performed in a slaughterhouse, although it was demanded and recognized by the police in Halle. Gera regulations insisted that this

meat should be taken to the Gera slaughterhouse and there reinspected (*at twice the fee charged for the inspection of German meats*). Now, it is not unreasonable to maintain that this meat, after thus being microscopically inspected *three* times, should at least stand on the same footing in Gera enjoyed by German meats which had been inspected but once. Such, however, is not the case. If the dealer wished to sell these goods in Gera he would be obliged to display a sign in his store stating that he was selling imported American meats, and this in the face of a *warning issued by the city council (stadtrath) against eating imported* (i. e., anything but German) *pork unless it was thoroughly cooked*. Whether it is this official warning or the Gera inspection (at double price) which is superfluous the writer will not attempt to argue. But to follow the case: The smoker B had no intention of selling the goods in Gera, but wished to ship them to C in Dresden. The Dresden authorities, however, could not, according to their regulations, recognize either the American, the Halle, or the Gera official inspections, so C could not sell his goods unless they were inspected in Dresden *for a fourth time*.

Upon more than one occasion the question of these repeated reinspections has come before the courts. Two cases, passed upon by the same five judges in Berlin, have recently been brought to my attention and will interest the reader. By reading the two regulations quoted in the footnotes, it will be seen that they are not identical in wording, although both are intended as hygienic measures to cover identically the same conditions. A comparison of the portions which are here italicized is instructive, and a comparison of these two cases with the case given above (Halle; Gera; Dresden), pages 24, 25, will give the reader a fair idea of the trade restrictions which have given rise to so many complaints.

*Case I.*¹—The defendant, a merchant, had sold on November 26, 1898, in Stettin, pickled pork of American origin, which had been officially reinspected in Altona,

¹Kammergerichtsurteil vom 3. Juli 1899. Im Namen des Königs! In der Strafsache wider den Kaufmann J—— K—— zu Stettin wegen Uebertretung der Polizeiverordnung des Regierungspräsidenten zu Stettin vom 10. Februar 1894 hat auf Berufung der königlichen Staatsanwaltschaft gegen das Urteil der Strafkammer V. des königlichen Landgerichts zu Stettin vom 15. April 1899 eingelegte Revision des Strafsenat des königlichen Kammergerichts in Berlin, Lindenstr. 14 in der Sitzung vom 3. Juli 1899 an welcher Teil genommen haben:

1. Groschuff, geheimer Oberjustizrat, Senatspräsident als Vorsitzender.
 2. Ziegler, geheimer Justiz- und Kammergerichtsrat.
 3. von Uechtritz, Justiz und Kammergerichtsrat.
 4. Thielmann, Kammergerichtsrat.
 5. Dr. Kronecker, Kammergerichtsrat als beisitzende Richter.
- Wörmann, Staatsanwaltschaftsrat als Beamter der Staatsanwaltschaft.
Kron, Referendar als Gerichtsschreiber.

Für Recht erkannt:

Auf die Revision der königlichen Staatsanwaltschaft wird das Urtheil der V. Strafkammer des königlichen Landgerichts zu Stettin vom 15. April 1899 aufgehoben

but not in Stettin. Thereby he had disregarded paragraphs 3 and 4 of the police regulations, for the latter provided that he could not, as merchant, sell this meat unless provided with an attest or stamp of a meat inspector who was authorized for the *place of sale* ("Verkaufsort"). The place of sale in sense of paragraph 4 is that place (Stettin) where the defendant as merchant sold the meat; the regulations govern the slaughtering, offering for sale, and selling in the Stettin district. The opposite view, held by the judge of the lower court, is contrary to the clear wording and sense of the regulations, which do not provide for an inspection in Germany, as the

und die Sache zur anderweiten Verhandlung und Entscheidung auch über die Kosten der Revisionsinstanz, an das Berufungsgericht zurückgewiesen.

VON RECHT WEGEN GRÜNDE.

Die Revision der königlichen Staatsanwaltschaft, welche Verletzung der §§ 3, 4, 14 der Polizeiverordnung des Regierungspräsidenten zu Stettin vom 10. Februar 1894 rügt, ist begründet. Der Angeklagte, welcher Kaufmann ist, hat am 26. November 1898 gepökeltes aus Amerika stammendes Schweinefleisch in Stettin verkauft, welches zwar in Altona aber nicht in Stettin amtlich untersucht und dessen Freiheit von Trichinen und Finnen daher auch nur durch ein Attest des Altonaer, nicht durch ein solches des Stettiner Trichinenbeschauers nachgewiesen war. Damit hat er gegen die §§ 3, 4, der erwähnten Verordnung verstossen, denn der amtliche Nachweis, ohne den der Angeklagte als Kaufmann das Fleisch § 3 nicht verkaufen durfte, konnte nach § 4 nur durch ein amtliches Attest oder durch einen Stempel eines für den *Verkaufsort* concessionirten Trichinenbeschauers geführt werden.

Verkaufsort im Sinne des § 4 ist derjenige Ort, an welchem der Angeklagte als Kaufmann das Fleisch verkauft (§ 3, Abs. 1), also Stettin, die ganze Verordnung regelt auch lediglich des Schlachten, Feilhalten und den Verkauf innerhalb des Stettiner Bezirks; die entgegengesetzte Auffassung des Vorderrichters widerspricht dem klaren Wortlaut und Sinn der Verordnung, diese beabsichtigt nicht, wie das Berufungsurteil irrtümlich annimmt lediglich eine Untersuchung des Fleisches in Deutschland vorzuschreiben, sondern sie wollte anordnen, dass diese Untersuchung gerade an demjenigen Orte des Regierungsbezirks Stettin stattfinde, wo das Fleisch zum Verkauf gelangt, dass sich aus dieser Auslegung, wie das Schöffengericht unter Billigung der Strafkammer ausführt, bedenkliche Folgen ergeben, kann nicht zugestanden werden. Eine Mehrheit von Untersuchungen ist, wie die Revision zutreffend ausführt dadurch zu vermeiden, dass das Fleisch von der Einfuhrstation, ohne dort untersucht zu werden, unter amtliches Verschluss an den im Regierungsbezirk Stettin belegenen Verkaufsort gesandt wird. Die Sache war daher unter Aufhebung des angefochtenen Urteils zur anderweiten Verhandlung und Entscheidung an das Berufungsgericht zurück zuverweisen, welches auch über die Kosten der Revision instanz zu befinden haben wird.

(Gez:)

GROSCHOFF,
ZIEGLER,
VON UECHTRITZ,
THIELMANN,
Dr. KRONECKER.

An Herrn Rechtsanwalt L., zu Grabow.

Paragraph 3.

Kaufleute und Händler, sowohl in den Städten, als auf dem platten Lande, welche Schweinefleisch oder daraus bereitete Fleischwaaren feilhalten, dürfen diese Gegenstände erst dann zum Verkaufe auslegen, feilhalten oder verkaufen, wenn sie der Ortspolizeibehörde einen amtlichen Nachweis darüber geführt haben, dass die Gegen-

first decision erroneously assumes, but they are intended to provide that this inspection shall be made in that part of the Stettin district where the meat is sold; that this interpretation would result in serious consequences, as assumed by the lower court, can not be admitted. Repeated inspections¹ may be avoided by sending the meat, uninspected, directly to the place of sale.

Case II.²—The appeal (of another case) is rejected. The lower court has correctly assumed that section 2, article 2, of the regulations (of Bromberg) provide only for a single inspection in the German Empire of meat imported from foreign countries;

stände auf Trichinen und Finnen vorschriftsmässig untersucht und frei von Trichinen und Finnen befunden worden sind.

Ausgenommen von dieser Verpflichtung sind nur die Grosshändler (das sind diejenigen, welche derartige Waaren nicht unter einer vollen Kiste verkaufen), soweit es sich lediglich um die unter Steuerverschluss resp. im Transitverkehr durchgehenden amerikanischen Schweinefleischwaaren handelt.

Paragraph 4.

Der im § 3 erforderte Nachweis wird geführt, entweder:

(a) Durch ein Attest der Polizeibehörde des URSPRUNGSortes der fraglichen Waaren DES Inhalts: dass dort die Untersuchung der geschlachteten Schweine auf Trichinen und Finnen obligatorisch ist, oder dass die Schweine, von denen die Waaren herühren, auf Trichinen und Finnen vorschriftsmässig untersucht und frei davon befunden worden sind, oder

(b) Durch ein Attest der Polizeibehörde des ABSENDUNGSortes beziehungsweise eines dortigen amtlichen Trichinenschauers darüber dass die Fleischwaaren dort vorschriftsmässig untersucht und frei von Trichinen und Finnen befunden worden sind, oder

(c) Durch ein amtliches Attest oder

(d) Durch die deutliche Bezeichnung mit dem Farben-, Stich- oder Brennstempel. } Eines für den VERKAUFSort kon-

Schweinefleischwaaren, deren Ursprungsort ausserhalb des Deutschen Reichs liegt, bedürfen stets entweder des sub c oder des sub d angeführten Nachweises.

¹ Compare above, p. 24. Halle.

² In Namen des Königs. In der Strafsache gegen den Kaufmann W—— K—— zu Gnesen, wegen Uebertretung der Bromberger Regierungsverordnung vom 1. November 1897 hat auf die von der königlichen Staatsanwaltschaft gegen das Urteil der Strafkammer 3 des königlichen Landgerichts zu Gnesen vom 10. Dezember 1898 eingelegte Revision der Strafsenat des königlichen Kammergerichts zu Berlin in der Sitzung vom 23. März 1899, an welcher Teil genommen haben:

1. Groschoff, geheimer Justiz u. Kammergerichtsrat.
 2. Ziegler, geheimer Justiz u. Kammergerichtsrat.
 3. von Uechtritz.
 4. Thielmann, Kammergerichtsrat.
 5. Dr. Kronecker, Kammergerichtsrat als Richter.
- Richter, Staatsanwalt als Beamter der Staatsanwaltschaft.
Dr. Werner, Referendar, als Gerichtsschreiber.

Für Recht erkannt:

Die Revision der königlichen Staatsanwaltschaft gegen das Urteil der 3. Strafkammer des königlichen Landgerichts zu Gnesen vom 10. Dezember 1898 wird zurückgewiesen, die Kosten des Rechtsmittels werden der Staatskasse zur Last gelegt.

VON RECHTS WEGEN: GRÜNDE.

Die Revision der königlichen Staatsanwaltschaft, welche Verletzung der §§ 2 und 3 der Bromberger Regierungspolizeiverordnung vom 1. November 1897, rügt, konnte

this inspection is to take place at the place in which the meat enters the Empire. This interpretation corresponds to section 3, as well as to the purpose of the regulations. *The opinion of the appellant would, as is rightly contended in the judgment, lead to unjust (sachwiedrigen) and clearly unintended results, that meat imported from foreign countries should be subjected to a reinspection every time it is shipped from one place to another in the Bromberg district.*

Number of trichina inspectors in Germany.—The number of trichina inspectors in Germany is variously estimated at from 25,000 to 100,000. In connection with the estimates, and also in connection with the outbreaks, it is necessary first to understand that a sharp line should be drawn between two different classes of these workers. This point, which not a few persons have overlooked, is of considerable importance.

First. We must distinguish those inspectors who are stationed at regular official inspection offices, such as in slaughterhouses, and who are under the constant supervision of a higher inspector. These persons give up practically their entire working time to this duty, and they work in the cities and larger towns.

Second. We must distinguish those inspectors who follow some other line of work as a vocation (physicians, druggists, teachers, butchers, blacksmiths, etc.) and who take up the trichina inspection simply as an incidental source of income. For the most part, these men and women are scattered over the country and country towns, but are not so numerous in cities. They work independently and are not subject to the daily control undergone by the first class. They are officially licensed (after an examination) to do the work, and, like all

keinen Erfolg haben. Zutreffend hat der Vorderrichter angenommen, dass der § 2 Absatz 2 der Verordnung für das aus dem Auslande stammende Schweinefleisch nur eine einmalige Untersuchung vorschreibt, welche an demjenigen Orte vorzunehmen ist, an welchem das Fleisch vom Auslande in das Deutsche Reich eingeführt wird. Diese Auslegung entspricht sowohl dem § 3, nach welchem das Fleisch nach erfolgter Untersuchung verwendet und verkauft werden darf, als auch dem Zweck der Verordnung, welcher durch eine einmalige innerhalb des Deutschen Reiches zu bewirkenden Untersuchung erreicht wird. *Die Auffassung der Revision würde, wie das Berufungsurteil mit Recht ausführt, zu dem sachwidrigen und offenbar nicht gewollten Ergebnis führen, dass das aus dem Auslande stammende Fleisch bei jeder Ortsveränderung innerhalb des Regierungsbezirks Bromberg einer neuen Untersuchung unterworfen werden müsste.* Die Revision war daher zurückzuweisen. Die Kosten des Rechtsmittels fallen nach § 505 Str. P. O. der Staatskasse zu Last.

(Gez:)

GROSCHOFF,
ZIEGLER,
V. UECHTRITZ,
THIELMANN,
DR. KRONECKER.

Wer Schweinefleisch oder Schweinefleischwaren einführt, deren Ursprung ausserhalb des Deutschen Reiches gelegen ist, ist verpflichtet die Waren durch den von der Ortspolizeibehörde für den betreffenden Bezirk bestellten Trichinenschauer auf Trichinen und Finnen untersuchen zu lassen.

other trichina inspectors, are subject to a triennial reexamination in the theory and practice of their duties. While many of these persons are undoubtedly conscientious in their work and fully able to carry it on, it is but natural that many of them should be less expert and in some instances intellectually inferior to the trichina inspectors employed in regular inspection offices. It may be expected, therefore, that more errors will occur in the inspection as conducted by this second class of workers than by the first, for sometimes days or weeks, perhaps months, pass between their inspections. From the published statistics it can not be determined how many inspectors in Germany belong to the first and how many to the second class.

According to the statistics the number of inspectors employed, the number of hogs examined, and the number of trichinous hogs found, for the years 1886-1896, are for Prussia alone as follows:

*Number of inspectors, number of hogs inspected, and number of hogs found trichinous
1886-1896.*

Year.	Number of inspectors.	Number of hogs inspected.	Number of hogs found trichinous.	Authority.
1886.....	22,939	4,834,898.5	2,114	} Ostertag, 1899, p. 504.
1887.....	23,297	5,486,416.5	2,776	
1888.....	23,836	6,051,249.5	3,111	
1889.....	24,030	5,500,678.5	3,026	
1890.....	24,454	5,590,510	1,756	} Veröff. kais. Gesundheitsamtes, 1894, No. 13, p. 208.
1891.....	24,586	6,550,182	2,187	
1892.....	25,816	6,234,559	2,085	
1893.....	26,855	6,251,766	1,422	} Veröff. kais. Gesundheitsamtes, 1895, No. 20, p. 347.
1894.....	26,881	6,895,222	1,393	
1895.....	27,089	7,752,171	1,531	} Veröff. kais. Gesundheitsamtes, 1896, No. 41, p. 790.
1896.....	27,602	8,759,496	1,877	
				Veröff. kais. Gesundheitsamtes, 1898, XXII, (5), p. 95.

It is interesting to compare these Prussian statistics of the number of trichina inspectors with the statistics of the Regular Army of the United States. According to the Official Army Register for 1897 the total number of officers and enlisted men (exclusive of the retired list) of the United States Army was 28,238. The number of enlisted men provided for by law was 25,000. Thus for Prussia alone the trichina inspection force in 1895 was almost as large (27,089) as the entire Regular Army of the United States, and during the years 1892-1895 the number of Prussian trichina inspectors was greater than the number of enlisted men then authorized by law for the United States Army.

Comparing the total population of Prussia (December 2, 1895), given at 31,855,123, with the number of inspected hogs and the number of trichina inspectors employed, we find an average per capita of nearly

one-fourth of an inspected hog (0.2433); we also find that Prussia employed (1895) one trichina inspector for approximately every 1,176 inhabitants. Comparing the number of inspectors, the number of hogs inspected, and the number of trichinous hogs found, we note that each inspector examined on an average 286 hogs, and that it took on an average about 17.69 inspectors to find each trichinous hog. In this computation the best available (official) Prussian statistics have been taken as basis. The American pork is evidently not included in the above statistics of hogs. If we extend these statistics to the total number of inhabitants in the German Empire, given December 2, 1895, at 52,279,701, we find that on a basis of the Prussian inspection (1 inspector to 1,176 inhabitants), assuming the same conditions (which, by the way, do not actually exist), there would be about 44,455 trichina inspectors.

As a matter of fact, the above computation does not prove that 44,455 would be the number of inspectors necessary to have examined the pork consumed in Germany in 1895, since it leaves out of consideration a number of important factors, viz: The number of hogs one inspector can examine in a year, hence the number of inspectors which would have been actually necessary for the inspection of the number of hogs given; the number of hogs slaughtered but not inspected; the amount of imported meat, etc. The above estimate would make the total number of hogs about 12,700,000. The Imperial health office in 1898 estimated the annual killing at 14,000,000 hogs. Accepting this latter estimate, and comparing the average number (286) of hogs examined in Prussia by each inspector, we obtain an estimate of 48,951 trichina inspectors for the Empire, calculating upon the Prussian basis. Still, this can not be looked upon as exact. If the work were centralized, so that it could be systematized, 3,000 microscopists of class No. 1 (see p. 28) could easily examine all the hogs slaughtered in Germany, even upon the basis of a low number of examinations daily. Scattering the slaughtering over such a large area necessarily results in the licensing of a greater number of inspectors.

Accordingly, respecting the number of microscopists required, the general principle may be laid down that this is more dependent upon the number of places at which slaughtering occurs than it is upon the number of hogs slaughtered, and that the fewer the places of slaughtering, the fewer inspectors will be required even by an increase in the number of animals slaughtered.

This general principle is exceedingly important in considering the proposition that the United States Department of Agriculture should introduce an obligatory trichina inspection of all hogs slaughtered in America. For it is immediately evident that if all of the hog killing for the entire country could be concentrated at the registered abattoirs, we should have to deal only with inspectors of class No. 1 (see

p. 28). The organization would therefore be comparatively easy, for a few thousand inspectors constantly employed could accomplish the work. This concentration, however, would be impossible. Hogs will continue to be killed on farms and in country towns; hence, when anyone proposes that the Department of Agriculture should introduce a universal inspection, he practically demands that a large army of trichina inspectors of class No. 2 should be appointed and distributed over the immense area of the United States. Quite aside from the legal complications, it should first be inquired whether such a plan is practicable from a purely hygienic standpoint, and for this inquiry we must turn first of all to the German statistics.

Expense of the trichina inspection in Germany.—It is impossible to present any official statistics of the expense of this system for the entire German Empire, although several comparative estimates may be cited. Wasserfuhr (1892) gives an interesting account of the expenses for Berlin, Prussia. Taking these estimates as basis, we may compute what the approximate expense of the system for the entire German Empire would be, assuming that the Berlin conditions applied to all places.

The number of swine slaughtered and examined at the Central Slaughterhouse at Berlin during the year was estimated at 459,000. The microscopists received 55 pfennigs for the examination of each hog, making a total of 252,450 marks (Wasserfuhr gives it as 247,500 marks). The total amount of salaries paid to 6 chiefs, 12 deputy chiefs, and 50 sample takers is given at 95,850 marks. Upon this basis the salaries alone for inspecting 459,000 hogs amounted to 348,300 marks (\$82,895.40), or 0.7588 mark (\$0.18) per hog. Extending this estimate to the 14,000,000 annual kill for Germany, we find that the 55 pfennigs per head due the microscopists amounts to 7,700,000 marks (\$1,832,600), while the 0.2088 mark per head due to the other employees mentioned amounts to 2,923,200 marks (\$695,721.60); total, 10,623,200 marks (\$2,528,321.60). In this estimate no allowance is made for rent, heat, light, water tax, office expense, purchase and repair of instruments, stationery, etc., or the loss of condemned meats.

For comparison with these figures we may notice an estimate made on the expenses in Regierungs-Bezirk Posen. Géronne (1894, p. 123) states that this bezirk expends "more than" 150,000 marks (\$35,700) annually upon the trichina inspection (1889-1891). Accepting 150,000 marks as approximate, Posen slaughtered during 1889-1891 an average of 152,478 hogs annually, making the cost of the trichina inspection 0.983 mark (\$0.234) per head. Extending this estimate to the 14,000,000 annual kill for the Empire, we obtain a cost of 13,762,000 marks (\$3,275,356).

Still a third computation may be made upon basis of weight. According to the Government's argument in support of the meat-inspec-

tion bill, the Saxon estimates are 0.64 pfennig per kilogram for inspecting pork, and 0.42 pfennig per kilogram for inspecting beef. We shall not be very far out of the way if we attribute the difference of 0.22 pfennig (0.05236 cent) in great part to the trichina inspection.

It is estimated that the annual consumption of meat in Germany is 45 kilograms per capita, but no estimate is accessible to me as to the consumption of pork. An estimate may, however, be made as follows: Saxony used, in 1897, 15.3 kilograms beef and 25.9 kilograms pork per capita. If the Saxon average were the average for Germany, the inspection for the entire Empire upon this basis would cost $0.0022 \text{ pfennig} \times 25.9 = 0.5698 \text{ mark}$ ($\times 0.238 = \$0.1356124$) per capita $\times 52,279,701$ inhabitants (1895) = 29,788,953 marks ($\times 0.238 = \$7,089,772$)—a very high estimate. Again, according to the *Deutsche Fleischer Zeitung*, August 30, 1899, it cost the city of Leipzig, Saxony, in 1898, 90,000 marks (\$21,420) to inspect 131,708 animals for trichinæ, giving a rate of 0.68332 mark (about 16½ cents) per animal. Extending the computation to the 14,000,000 annual kill (hogs), the microscopic inspection, based upon the Leipzig figures, would cost the Empire 9,566,648 marks (\$2,276,862).

To summarize: Upon the basis of the figures given, the microscopic inspection would cost Germany—

	Marks.	Dollars.
Taking the Saxon per kilogram figures.....	29,788,953	= 7,089,772
Taking the Posen per hog figures.....	13,762,000	= 3,275,356
Taking the Berlin per hog figures.....	10,623,200	= 2,528,321
Taking the Leipzig per hog figures.....	9,566,648	= 2,276,862
Average.....	15,935,201	= 3,792,577

It will be noticed that the highest estimate is based upon the food consumption, hence includes imported as well as German meat, while the other estimates include only the meat slaughtered in Germany. Further, it is doubtful whether the per capita pork consumption in Germany, including the vast agricultural areas, is as great as that of Saxony with all its factories. Accordingly, the highest estimate is undoubtedly too high, while the others are too low.

While these figures therefore can not be looked upon as exact, they may be construed as meaning that the trichina inspection, if extended to entire Germany, would cost somewhere near 13,000,000 to 15,000,000 marks, or about \$3,000,000 to \$3,500,000, annually.

The person who wishes the obligatory trichina inspection introduced into the United States may take these figures as a working basis, compare them with salaries paid in America, consider the few cases of trichinosis we have, examine the German statistics, and then ask himself the question whether the Department of Agriculture would be justified in expending this sum of money for the purpose indicated, or whether it could accomplish more good with the same sum expended in other ways.

It is interesting in this connection to notice that the appropriation for the United States Department of Agriculture for the past three years has been: 1897, \$2,448,532; 1898, \$2,467,902; 1899, \$2,829,702; average, \$2,582,045.33.

Thus it will be seen by comparison with the figures above, the tri-china inspection would cost Germany about \$500,000 to \$1,000,000 more than the entire annual appropriation for the United States Department of Agriculture.

Amount of American pork imported into Germany, 1892-1898.—The author is indebted to Mr. Frank H. Hitchcock, Chief of the Section of Foreign Markets of this Department, for the following table, giving the total amount of American pork exported to Germany for the fiscal years 1892 to 1898, inclusive, compiled from the American export statistics. The table of statistics of pork imported into Germany during the calendar years 1897 and 1898 is taken from official German statistics:

Quantity of bacon, hams, and pork exported from the United States to Germany during the fiscal years ended June 30, 1892 to 1898, inclusive.

Fiscal year—	Bacon.	Hams.	Pork, fresh.	Pork, salted or pickled.	Total.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
1892.....	15,717,046	955,393	.....	5,077,360	21,749,799
1893.....	8,106,499	898,804	.....	709,900	9,715,203
1894.....	12,537,849	1,293,735	.....	2,431,325	16,262,909
1895.....	13,160,325	1,977,568	.....	2,149,850	17,287,743
1896.....	9,086,825	1,855,798	.....	1,261,000	12,203,623
1897.....	26,878,289	2,943,983	.....	1,902,637	31,724,909
1898.....	51,524,555	11,963,631	621,917	8,995,122	73,106,235
Total	137,011,398	21,888,912	621,917	22,527,194	182,049,421
Total tons ¹	61,166	9,772	277	10,057	81,272

¹ Tons of 2,240 pounds.

Quantity of bacon, hams, pork, and sausages imported into Germany from the United States during the calendar years 1897 and 1898, according to German official statistics.

Articles.	1897.		1898.	
	<i>100 kilos.</i>	<i>Pounds.</i>	<i>100 kilos.</i>	<i>Pounds.</i>
Bacon.....	152,224	33,559,607	261,014	57,543,668
Hams	26,353	5,809,835	43,344	9,555,705
Pork, prepared.....	18,688	4,119,994	71,609	15,787,063
Pork, fresh.....	14,561	3,196,919	13,912	3,067,067
Sausages (all kinds).....	10,862	2,394,658	32,823	7,236,224
Total.....	222,628	49,081,013	422,702	93,189,727
Total tons ¹.....	.....	21,911	.....	41,603

¹ Tons of 2,240 pounds.

The above figures differ somewhat from the records of the Inspection Division of this Bureau, a difference which is probably to be explained in several ways; some meats certified for Germany have been imported into that country indirectly, and it is a well-established fact that not inconsiderable quantities of American meats have been admitted by certain German custom-houses without requiring the proper certificate. It is therefore impossible to give the exact quantity of American meat consumed in Germany. I am indebted to my colleague, Dr. A. M. Farrington, for the following table of quantities of pork certified for Germany by the Inspection Division:

Microscopic pork exported to Germany during the fiscal years ended June 30, 1892 to 1898, inclusive.

	Pounds.		Pounds.
1892.....	19, 678, 726	1897.....	38, 420, 798
1893.....	7, 770, 618	1898.....	107, 224, 109
1894.....	16, 752, 858		
1895.....	29, 670, 410	Total	237, 000, 987
1896.....	17, 483, 468		

Part II.—A STATISTICAL REVIEW OF TRICHINOSIS IN GERMANY DURING THE EIGHTEEN YEARS 1881-1898 (Stiles).

Summary.—In order to have complete years for comparison the years 1881 and 1882 are accepted as representing a period before the exclusion of American meats, 1883-1891 as the period during the exclusion, and 1892-1898 as the period since the readmission.

To avoid the charge of misrepresentation attention is here especially directed to the fact that this arrangement does not take into account the fact that the decree of exclusion was issued on March 6, and went into effect thirty days later, while the decree of readmission is dated September 3, 1891. Accordingly, during several months of 1883 and 1891, American pork was admitted, but the trade of those few months was not very extensive.

Summarizing the outbreaks by years the following tables are obtained:

1860-1880: 8,491 cases, 513 deaths; average, 404 $\frac{1}{3}$ cases, 24 $\frac{2}{3}$ deaths.

1881-1898: 6,329 cases, 318 deaths; average, 351 $\frac{1}{3}$ cases, 17 $\frac{2}{3}$ deaths.

1860-1898: 14,820 cases, 831 deaths; average, 380 cases, 21 deaths.

Case-mortality.—1860-1880, 6.04 per cent; 1881-1898, 5.02 per cent; 1860-1898, 5.6 per cent.

Number of cases of trichinosis and deaths therefrom, 1881 to 1898, inclusive.

Year.	Prussia.		Saxony.		Other States.		Empire.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
1881.....	387	10	177	1	3	0	567	11
1882.....	209	6	160	0	257	0	626	6
1881-1882.....	596	16	337	1	260	0	1,193	17
1883.....	637	71	155	5	15	0	807	76
1884.....	348	29	73	2	50	0	471	31
1885.....	365	17	154	7	16	0	535	24
1886.....	136	10	47	1	20	2	203	13
1887.....	294	15	234	26	293	9	821	50
1888.....	134	14	404	34	18	0	556	48
1889.....	216	15	41	0	1	0	258	15
1890.....	96	0	117	0	9	0	222	0
1891.....	175	12	30	0	15	5	220	17
1883-1891.....	2,401	183	1,255	75	437	16	4,093	274
1892.....	108	4	0	0	0	0	108	4
1893.....	28	1	0	0	10	0	38	1
1894.....	72	5	2	0	3	1	77	6
1895.....	358	4	3	0	1	0	362	4
1896.....	74	6	0	0	1	0	75	6
1897.....	141	6	2	0	1	0	144	6
1898.....	44	0	35	0	160	0	239	0
1892-1898.....	825	26	42	0	176	1	1,043	27
1881-1898.....	3,822	225	1,634	76	873	17	6,329	318

From this it is clear that totals of 6,329 cases, 318 deaths, are reported during the eighteen years in question, giving an average of $351\frac{1}{3}$ cases, $17\frac{1}{3}$ deaths, per year. The case-mortality of the disease in Germany for eighteen years was about 5 per cent.

The table also shows that there has been a general decrease in trichinosis in Germany during recent years. This may be interpreted as being due to several causes, of which the following are the more important:

1. The general education of the public by warnings on the part of police and other authorities that the inspection should not be relied upon too implicitly, but that pork should be well cooked.

2. The microscopic inspection, by removing from market about 1,400 to 3,100 trichinous hogs per year, naturally reduces the chances of infection for those persons who do not heed the warnings by the authorities and the lessons taught by previous epidemics.

The disease is still encouraged by the following circumstances:

1. The exceedingly dangerous custom of eating raw or rare pork. The sale of raw pork in public restaurants and railway dining cars is not calculated to decrease this custom.

2. The trichina inspection, while diminishing the chances of infection in one way, at the same time gives rise to a false feeling of security among many people, since the latter erroneously believe that if the pork has been inspected they may eat it raw without the slightest danger of infection. Even persons who have suffered from trichinosis are occasionally found who still have implicit faith in the inspection.

It appears exceedingly doubtful to the writer whether Germany will ever be entirely free from this disease.

A classification of the cases based upon the source of infection is exceedingly difficult, since a number of outbreaks are reported with details which are insufficient to permit a definite judgment, and since numerous German laws and regulations must be constantly held in mind. When the report says that the inspector was discharged or imprisoned, it may be assumed that the meat was inspected or its non-inspection was due to carelessness; when the report states that it could not be determined which of several inspectors examined the meat, this may be interpreted as meaning that the meat was examined. It must be admitted that if several persons examined the evidence independently some of the cases reported in a careless manner might be placed in different groups. All that can be demanded of the compiler is that he shall use good faith in attempting to interpret the reports. If reports are equivocal, or if authorities disagree, any error of classification, if discovered, should be charged to the original reporter for not making his statements more intelligible.

A classification of the cases and deaths arranged according to the source of infection is shown in the following table:

Summary for German Empire, 1881 to 1898, inclusive.

1881-1882.		1883-1891.		1892-1898.		Total.	
Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
1,193	17	4,093	274	1,043	27	6,329	318
314	4	1,262	103	466	5	2,042	a 112
89	.....	42	10	11	3	142	b 13
272	.....	641	4	291	3	1,204	c 7
¹ [675	4]	[1,945	117]	[768	11]	[3,388	d 132]
.....	.....	63	.....	.....	.....	63	(e)
199	1	589	76	86	7	874	f 84
195	3	896	61	79	6	1,170	g 70
30	.....	63	5	58	.....	151	h 5
77	6	525	15	45	2	647	i 23
17	3	1	.....	.....	.....	18	j 3
.....	.....	11	.....	7	1	18	k 1

Totals divided as follows:

a Due to meat which, it would appear, was inspected and passed as free from trichinæ.

b Due to meat which was condemned, and usually buried, or was known to be trichinous, but was nevertheless used without proper safeguarding.

c Due to other defects in the inspection system.*

* As "other defects" in the inspection system may be included: Meat was eaten before results of the inspection were known; meat was inspected, but inspector suppressed the results of the examination; meat was stamped as free from trichinæ before inspection was ended; meat was marked in the inspection book as free from trichinæ; meat appears to have been smuggled around the inspection; inspector refused to examine meat; meat should have been inspected, but was not; buried hog (inspected?) was dug up and eaten, etc.

d Total cases and deaths which may be attributed to errors in the inspection system.

e Additional cases may or may not have been due to inspected meat.

f Definitely stated that meat was not inspected, or that no inspection existed; source of infection apparently known.

g Source of infection known, but details regarding inspection not given, or insufficient to warrant conclusion.

h Definitely stated that source of infection was not known or could not be traced.

i No data given regarding meat, or data insufficient to classify.

j Alleged to have been due to American meats. (See p. 156 ff.)

k Additional cases due to uninspected meat (of Russian origin).

¹ See note, p. 43.

In judging of the efficiency of the microscopic inspection, it is important to note that, according to the information at hand, 3,388 cases, with 132 deaths, appear to have been due to faults of the German inspection; this represents over 53 per cent of the total (6,329) number of cases and over 41 per cent of the total (318) number of deaths. When this is compared with the (approximately) 900 cases recorded for America (where we do not microscopically inspect our pork for home consumption—cases extending over about twice as many years as cited for Germany)—it can not be admitted that the German microscopic inspection system is a hygienic measure which it would be well to introduce into this country. On the contrary, it would appear that it is much better for us to rely upon our methods of curing and cooking rather than to expend between \$3,000,000 and \$4,000,000 annually to introduce a system which has a decided tendency to give the

public a false sense of security, and, furthermore, a system which would unquestionably result in extending that exceedingly unhygienic German custom (*Unsitte*) of eating raw or rare pork.

In judging of the relations of certified American pork to the German statistics, it is essential to notice that—

(1) During the exclusion of American pork (1883–1891), Germany reports a total of 4,093 cases, 274 deaths, giving an annual average of $453\frac{2}{3}$ cases, with $304\frac{1}{3}$ deaths.

(2) Since its readmission (1892–1898), 1,043 cases, 27 deaths, have been reported, giving an annual average of 149 cases, $3\frac{1}{3}$ deaths.

(3) Thus, as there has been an actual decrease of $304\frac{1}{3}$ cases, and $26\frac{2}{3}$ deaths, per year, it can not possibly be maintained that American pork has caused any increase in trichinosis in Germany.

(4) During the exclusion, the source of the infection appears not to have been established (or reported) in 588 cases, representing 14.3 per cent of the 4,093 cases reported.

(5) Since the readmission the source appears (from present data) not to have been established (or reported) in 103 cases, representing $9.87+$ per cent of the 1,043 cases reported.

(6) This reduction in the percentage of cases of unestablished or unpublished sources would seem to indicate that since American pork has been used in Germany the authorities have increased their efforts in tracing the origin of infection.

(7) And if with this apparently increased vigilance, 940 cases, or $90.12+$ per cent, have been traced, *and not a single one of these has ever been even alleged to have been due to American pork*, it would not appear justifiable for anyone to advance the claim that the remaining 103 cases (average of $14\frac{1}{3}$ cases per year, or $9.87+$ per cent) were due to American meat.

(8) Especially is such claim not justifiable in view of the fact that during the exclusion of our products 588 cases (average of $65\frac{1}{3}$ cases per year, or 14.3 per cent) occurred, the source of which is not given.

(9) It can not therefore be admitted that the systematic attacks upon American pork found in the German agrarian press find any support in the accessible German health statistics.

(10) Of the 18 cases, 3 deaths, which are alleged to have been due to American pork during 1881–1883, it may be remarked that Virchow, the leading pathologist in Germany, and Fränkel, one of Germany's leading sanitarians, have not admitted the evidence as valid, nor is the evidence accepted by Hertwig, Brouardel, or Wasserfuhr. (See p. 168.)

(11) Thus it must be submitted that the sanitary quality, with reference to this disease, of American pork exported to Germany, is vindicated by a summary of German statistics, based upon German evidence.

(12) And even the suggestion is not entirely unjustified that a total prohibition of the use of German pork in Germany and the compulsory use of American pork would probably do more to eradicate trichinosis than does their elaborate and expensive microscopic inspection.

It can not justly be replied to this that the freedom from trichinosis due to American pork is accounted for by the German reinspection, for it may be conservatively estimated that not one-half of the American pork consumed has been reinspected in Germany. Furthermore, the fact that over one-half of the cases of this disease which occur are directly traceable to faults in the German inspection does not support the view that the reinspection is a very important factor in the case.

It is not the intention of the author to maintain *that it would be absolutely impossible under any circumstances for a single case of trichinosis* to arise in Germany from the use of American pork; his claim simply is that a compilation of the German evidence fails to show that a single case of the disease has been traced to the more than 200,000,000 of pounds of American pork exported to Germany during the fiscal years 1892-1898; and a study of the statistics does not support the view that the microscopic inspection gives a greater protection than the curing methods. He is therefore forced to the conclusion that, from the practical experience of the German people with immense quantities of American pork, there is no sanitary justification for the numerous systematic and, too often, rabid attacks upon this article of diet, which is so important to the thousands of German factory hands who live by the manufacture of articles exported to the United States, as well as to thousands of other Germans.

It might here be remarked that for nearly two years past there has been a standing offer in Germany, issued by an association of importers of American meats, of a reward of 1,000 marks (\$238) for the first person who can prove a case of trichinosis in man in Germany due to American cured meats or sausages imported under the American certificate since 1891. Recent information is to the effect that no one has claimed the reward.

The outbreaks of trichinosis compiled in this report are arranged as follows:

A. Prussia: (1) By years and outbreaks, p. 43; (2) By Regierungs-Bezirke,¹ p. 99. B. Saxony, by years, p. 134. C. Other German States: (1) Bavaria, p. 146; (2) Brunswick, p. 147; (3) Bremen, p. 149; (4) Alsace-Lorraine, p. 150; (5) Hamburg, p. 152; (6) Lübeck, p. 153; (7) The rest of Germany, p. 153.

Minimum statistics.—The following statistics make no pretense of being complete, but they are by far the most complete statistics on

¹In the statistics to follow, this designation will, for sake of space, be abbreviated to "R.-B."

the subject ever published. In considering them, however, we should take them as minimum figures, since they are open to the same seven¹ chances of error which are common to statistics on all other diseases compiled from literature.

Double arrangement of statistics.—In studying a disease statistically it is well at the same time to consider it both geographically and chronologically. This is advisable for several reasons, of which only the following will here be mentioned: When considering the statistics geographically we are occasionally able to draw more or less general conclusions regarding the habits of the country, which explain the frequency or infrequency of a given disease in certain districts. This arrangement of the statistics amounts in some cases to practically a geographical summary of the outbreaks we study chronologically. On the other hand, studying a disease chronologically frequently leads to more or less general conclusions regarding changes in the conditions which take place from time to time. Each arrangement is the complement of the other.

¹ From the very nature of things, all medical statistics compiled from literature are open to at least seven chances of error; but, taking all these chances into consideration, the figures obtained by adding the cases and deaths published may confidently be looked upon as minimum statistics. These chances of error in the present compilation are:

First. Many cases of disease which actually occur do not come to the knowledge of the authorities. The Prussian statistician, Eulenberg, has recognized this in connection with trichinosis in stating: "Leider gelangen nicht alle Fälle von Erkrankungen zur Anzeige; man kann vielmehr annehmen, dass eine weit grössere Menge derselben unbekannt bleibt." If Eulenberg could not make his statistics for Prussia complete, it can not be expected that I should be able to do so.

Second. In the case of many outbreaks, the number of cases and deaths given by different recorders do not agree. It is, of course, often impossible for the compiler to decide which report is more exact, but I have endeavored to follow *official* statistics, except in those cases where I had reason to believe that unofficial statistics were more exact.

Third. Not infrequently authors record "several" cases, or "many" cases, or "a great number" of cases. In such outbreaks I have endeavored to come within the limits of probability, but I may naturally have counted too few or too many cases to the outbreak in some instances. For "several" cases I have usually followed former authors by adopting "3" as the approximate number. Nath (1885, p. 117) in his official report for Regierungs-Bezirk Königsberg, definitely states that he has omitted such cases from his statistics.

Fourth. It is very probable that some published cases have escaped my attention.

Fifth. Because of lack of details in some instances it is difficult or impossible to decide whether two publications refer to the same or to different outbreaks.

Sixth. Some authorities give the name of the town, others the name of the district, in which the outbreak occurred; unless the number of cases agree it is difficult to determine whether the two references refer to the same or to different outbreaks.

Seventh. Some authors give their statistics in such a way that it is impossible to tell whether their deaths are included among their cases or are additional to their cases.

In the following studies the years 1881–1898 have been taken as a basis for more careful consideration, (1) because it is only since 1881 that most of the Prussian districts have issued local reports, and (2), on account of the official suppression of information by a secret order (see p. 21), the author, to his regret, finds it necessary to reject statistics issued after 1898.

Explanation of bibliographic citations.—In order to avoid repeated citation of full titles, the author's name, with date and page, is given. Reference should be made to Part IV (Bibliography) for the full title of works consulted.

A. KINGDOM OF PRUSSIA.

1860 to 1880: More than 5,575 cases, 448 deaths.

1881 to 1898: More than 3,822 cases, 225 deaths.

1860 to 1880.

Summary.—The statistics for Prussia prior to 1881 are very incomplete and greatly scattered. In many of the articles it is difficult to ascertain the exact number of cases or the exact location of the outbreak. My summary for the twenty-one years in question, based upon outbreaks compiled about four years ago, shows a total of 5,575 cases, 448 deaths, or an annual average of $265\frac{1}{4}$ cases, $21\frac{1}{3}$ deaths. There can scarcely be any doubt but that these figures fall below the actual statistics.

1881 to 1898.

Summary by source of infection.—A summary of the cases with reference to the source of infection is rather unsatisfactory, since satisfactory details are lacking in numerous cases, and the accounts given of many cases may be interpreted in various ways by different authors. Furthermore, while judging a report, it is constantly necessary to hold in mind the numerous regulations existing in different parts of the Kingdom. Accordingly, probably no two authors would agree exactly upon a summary. The following table, however, can be taken as being an approximately fair statement. If anyone is inclined to disagree with it he should place the responsibility of error upon the careless and incomplete—often equivocal—manner in which many of the outbreaks were reported.

Summarizing these cases in a table giving the source of infection for the periods 1881 and 1882, 1883-1891, 1892-1898, 1881-1898, the following table is obtained:

Summary of Prussian outbreaks, 1881-1898.

1881-1882.		1883-1891.		1892-1898.		1881-1898.	
Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
596	16	2,401	183	825	26	3,822	225
314	4	1,084	98	305	5	1,703	a 107
89	.....	42	10	11	3	142	b 18
5	.....	145	3	286	3	436	c 6
¹ [408]	4]	[1,271	111]	[602	11]	[2,281	d 126]
.....	.....	38	.....	.....	.....	38	(e)
57	1	293	32	56	7	406	f 40
21	2	265	20	76	6	362	g 28
20	.....	62	5	58	.....	140	h 5
74	6	461	15	26	1	561	i 22
16	3	.....	.....	.....	.....	16	j 3
.....	.....	11	.....	7	1	18	k 1

Totals divided as follows:

a Due to meat which, it would appear, was inspected and passed as free from trichinae.

b Due to meat which was condemned and would have been buried if the usual practice had been followed, or which was known to be trichinous, but nevertheless used without proper safeguarding.

c Due to other defects in the inspection system.*

* Meat was eaten before result of inspection was known; or meat was inspected, but the inspector suppressed the result of the inspection; or meat was stamped as free from trichinae before inspection was ended; or meat was marked in book as free from trichinae; or meat appears to have been smuggled around the inspection; or inspector refused to examine meat; or several hogs were slaughtered and only a part of them inspected; or meat should have been inspected, but was not.

d Total cases and deaths which may be attributed to faults of inspection system.

e Additional cases may or may not have been due to inspected meat.

f Definitely stated that the meat was not inspected; hence source of infection known.

g Source of infection known, but details regarding inspection not given or not sufficient to justify conclusion.

h Definitely stated that source of infection was not known or could not be traced.

i No data given regarding meat, or data insufficient to classify.

j Alleged to have been due to American meat; evidence not accepted by Virchow and Fränkel, but admitted by Ostertag.

k Additional cases due to uninspected meat of Russian origin.

¹ See note, p. 43.

From this it would appear that Prussia has had 3,822 cases, 225 deaths, during the eighteen years in question, or an average of 212½ cases, 12½ deaths, per year. For the years of exclusion of American meats (1883-1891) 2,401 cases, 183 deaths, are reported, or an average of 266⅔ cases, 20⅓ deaths, per year. For the years (1892-1898) since the readmission, 825 cases, 26 deaths, have been collected, or an average of 117⅔ cases, 3⅓ deaths, per year; thus showing not an increase, but an actual decrease of 149½ cases, 16⅔ deaths, per year, for the time when American meat was imported.

Of the total 3,822 cases it would appear that 1,703, or 44.5 per cent,

were due to meat which was inspected and passed as free from trichinæ, while a total of 2,281 cases, or 59.6 per cent, was due to this and other faults of the German inspection.

For the exclusion period (1883–1891) the source of 523 cases, or 25.9 per cent (of the 2,401 cases), was either not known or I have failed to find the source of infection; the possibility is, of course, not excluded that I have overlooked it. For the years (1892–1898) since the readmission, the source of 84 cases, or 10.1 per cent (of the 825 cases), was either not known or not published or has been overlooked.

Not a single case has been reported as due to certified American meats, but 16 cases, 3 deaths, have been attributed to uncertified meats in 1881.

The author is therefore unable to find in the Prussian health statistics any practical experience of the consumers of American pork which could be taken as basis for the numerous press attacks which appear upon our goods in that Kingdom.

1. PRUSSIAN CASES (1881–1898). ARRANGED BY YEARS AND OUTBREAKS.

NOTE.—In the following statistics figures inclosed in brackets [— cases, — deaths] are summaries, cross references, or repetitions, and are therefore not considered in making up the totals for the years. The deaths are included in the cases, hence not additional to them; thus, 24 cases, 1 death, signifies 24 cases, 1 of which was fatal.

1881: 387 cases, 10 deaths.

Summary for the year.—In a total of 387 cases, 10 deaths, it appears that 272 cases, 2 deaths, *were due to meat which was inspected and passed as free from trichinæ*; it is not improbable that several other cases also were due to inspected meat, but there is some chance for doubt. Several cases were due to eating meat before the result of the inspection was known. Sixteen cases, 3 deaths (Düsseldorf), were alleged to be due to American pork, but Virchow, Fränkel, and Ostertag (1895, p. 418) admit that the case lacks proof. The German Government considers American pork as the source of infection. Later Ostertag (1899, p. 506) states that American meat formed the source of infection. (See p. 173.)

No official or other sanitary reports for 1881 are accessible for the following Regierungs-Bezirke: Aachen, Aurich, Breslau, Coblenz, Danzig, Hannover, Hildesheim, Liegnitz, Magdeburg, Osnabrück.

No cases of trichinosis in man have been found in the official or other health reports for 1881 for the following Regierungs-Bezirke: Bromberg (Strahler, 1883), Coeslin (Massenbach, 1883, p. 39), Lüneburg (Alten, 1883, p. 22), Minden (Schultz-Hencke, 1883), Oppeln (Noack, 1883, p. 41), Schleswig-Holstein (Bockendahl, 1882, p. 19), Sigmaringen (Koch, 1883, p. 61), Stade (Bohde, 1883A, p. 26), Stralsund (Koehler, 1883), Trier (Schwartz, 1884, p. 48), Wiesbaden (Wagner [1882]).

Angerburg (Kreis), R.-B.¹ Gumbinnen 3 cases, 0 death.

Passauer, 1882, p. 104: The samples were sent to the inspector, who was not able at the time to make the inspection. He and his wife ate part of the samples, and both were taken sick with trichinosis. The meat was afterwards found to be trichinous. The Kreiswundarzt also observed another case of trichinosis, but details are not given. Accordingly, meat traced in two cases; details not given for the third.

Arnsberg (R.-B.) [24 cases, 1 death].

See Hoerde 18 (1), Linden 6.

Arnswalde, R.-B. Frankfurt 6 cases, 0 death.

Pistor, 1883, p. 44.

Berlin [21 cases, 2 deaths].

The statistics from different sources do not agree. Eulenberg, 1882, p. 349, Wernich, 1883, pp. 117, 118, and Ostertag, 1899, p. 497, give a total of 15 cases, 2 deaths.—Veröff., 1881, V, apparently gives only 9 hospital cases, 1 death.—If the dates given by various parties are correct, there was apparently a total of about 21 cases, 2 deaths. Wernich adds to his report that it is not known to what extent American hams are examined in Berlin, but during "this year, also, no case of disease was known to the police in connection with which the suspicion arose that it was due to American hams."—Salmon, 1884, p. 486: 15 cases.—For details of statistics, see separate outbreaks below.

Berlin, January 2-8 2 cases, 0 death.

Veröff., 1881, V (3), p. 11: Hospitals; details not given, except one patient between 6 and 15 years old, and one between 31 and 60 years.

Berlin, February 1 case, 0 death.

Wernich, 1883, p. 117: Widow E. received a present of sausage from outside of the city; she had also bought some meat in Berlin; it is not determined in the report from which meat the infection arose.

Berlin, March 6-13 1 case, 0 death.

Veröff., 1881, V (12), p. 59: Reports 1 case at hospitals March 6-13; patient between 16 and 30 years old.

Berlin, March 20-26 1 case, 0 death.

Veröff., 1881, V (14), p. 71: Case at hospital; patient between 16 and 30 years old.—Wernich, 1883, p. 117: Servant M. H., Charité Hospital, March 20; this case probably belongs here.

Berlin, January 1-March 31 [5 cases, 0 death].

Veröff., 1881, V (21), p. 115: Hospitals; one patient between 6 and 15 years; two between 16 and 30; two between 31 and 60 years old.—Veröff., 1882, VI (21), p. 115.

Berlin, April 5 cases, 0 death.

Wernich, 1883, pp. 117, 118: "Several [5?] officers of the 1 Garde-Artillerie-Regiment. The suspected source of infection was sausage purchased in Berlin. The butcher claimed that all of his pork was inspected, but that he bought considerable meat from the market 'which is also undoubtedly brought in from outside of Berlin.'"—Eulenberg, 1882, p. 349: "Denn obgleich der Metzger sein Schweinefleisch regelmässig durch einen Sachverständigen untersuchen lässt, so liefert dieser Fall doch den Beweis, wie wenig die Untersuchung einzelner Stücke von ausgeschlachtetem Fleisch Garantie dafür bietet, dass letzteres trichinenfrei ist." According to Eulenberg, therefore, *the meat was inspected and passed as free from trichinae.*

¹This abbreviation will be used in these statistics for "Regierungs-Bezirk."

Berlin, April 4 cases, 1 death.

Wernich, 1883, p. 117: F. Becker, wife, and children, had eaten of a ham received as a present from Coritten bei Neu-Cummersdorf. Several persons in Coritten also were taken sick from eating meat from the same hog. *Trichinæ* were afterwards found in the pork.

Berlin, May 15-21 2 cases, 0 death.

Veröff., 1881, V (22), p. 119: Hospitals; patients between 31 and 60 years old.

Berlin, August 14-20 1 case, 0 death.

Veröff., 1881, V (35), p. 189: Hospitals; patient between 16 and 30 years old.—

Veröff., 1881, V (46), p. 245: 1 case, 0 death, in hospitals from July 3 to October 1.

Berlin, October 3 [1 case, 1 death].

Wernich, 1883, p. 117: Servant M., Krankenhaus Friedrichshain, October 3; died October 16. This is probably the same as the next entry, in which case there is an error in dates.

Berlin, October 9-22 1 case, 1 death.

Veröff., 1881, V (43), p. 225: Case in hospital, October 9-15; patient between 15 and 30 years old.—Veröff., 1881, V (44), p. 231: Death in hospital, October 16-22. Both references are here assumed to be the same case. See also foregoing entry.

Berlin, October 12 1 case, 0 death.

Wernich, 1883, p. 117: Servant P.; until ten days previous to being taken sick she had been in Steglitz, and Wernich assumes that she was "therefore undoubtedly infected outside of Berlin;" Bethanien Hospital.

Berlin, December 12 2 cases, 0 death.

Wernich, 1883, p. 118: Meat was purchased in Berlin from a butcher, who stated that shortly before he had bought meat from Weissensee. It is, however, not shown that the Weissensee pork was the cause of the infection.

Bleicherode, Kr.¹ Nordhausen, R.-B. Erfurt, October

39 cases, 0 death.

Eulenberg, 1882, p. 350.—Richter, 1888, p. 113: As the inspector was discharged, *it would appear that the hog was inspected and passed as free from trichinæ*. "Die gerichtliche Untersuchung ist eingeleitet und der Fleischbeschauer seitens der Verwaltung seiner Stelle entsetzt worden." There occurred also, from same source of infection, 6 cases in Epschenrode, 2 in Grossbodungen, and 3 in Craga (q. v.).

Calau (Kr.), R.-B. Frankfurt a. O. 4 cases, 2 deaths.

Eulenberg, 1882, p. 349.—Pistor, 1883, p. 44: 3 cases, 2 deaths.

Cassel (R.-B.) [49 cases, 0 death].

See Rotenburg, 26; Steinbach-Hallenberg, 15; and Wahlerhausen, 8.

Cologne [Köln] (R.-B.) [3 cases, 0 death].

See Cologne (Stadt).

Cologne, R.-B. Cologne 3 cases, 0 death.

Schwartz, 1882, p. 30: Ham came from Westphalia.

Coritten bei Neu-Cunersdorf, Kr. Oststernberg, R.-B. Frankfurt a. O.

[3 cases, 0 death].

Coritten bei Neu-Cummersdorf 3 cases, 0 death.

See Coritten. Wernich, 1883, p. 117: "Several cases." See also Berlin, April.

¹ In this compilation this abbreviation will stand for "Kreis."

Craga, Kr. Nordhausen, R.-B. Erfurt 3 cases, 0 death.

Eulenberg, 1882, p. 350.—Richter, 1888, p. 113: See also Bleicherode. As the inspector was discharged, *it would appear that the hog was inspected and passed as free from trichinæ.*

Crüttinnen (Oberforsterei), Kr. Sensberg, R.-B. Gumbinnen ..

6 cases, 0 death.

Passauer, 1882, p. 104: Details not given.

Düsseldorf (R.-B.) [16 cases, 3 deaths].

See Düsseldorf (Stadt).

Düsseldorf (Stadt), R.-B. Düsseldorf 16 cases, 3 deaths.

This outbreak is attributed to American pork by the German Government. The evidence is not accepted by Virchow, Hertwig, Brouardel, Fränkel, Wasserfuhr, or Ostertag (1895); in 1899 Ostertag accepts the evidence, but does not explain his change of opinion. See p. 000.

Ellrich, Kr. Nordhausen, R.-B. Erfurt 8 cases, 0 death.

Eulenberg, 1882, p. 350.

Epschenrode, Kr. Nordhausen, R.-B. Erfurt, October

6 cases, 0 death.

Eulenberg, 1882, p. 350.—Richter, 1888, p. 113: From same source as the Bleicherode cases. As the inspector was discharged, *it would appear that the hog was inspected and passed as free from trichinæ.*

Erfurt (R.-B.) [58 cases, 0 death].

See Bleicherode 39, Craga 3, Ellrich 8, Epschenrode 6, and Grossbodungen 2.—Salmon, 1884, p. 486; 58 cases.

Fischhausen (Kr.), R.-B. Königsberg 3 cases, 1 death.

Nath, 1885, p. 115. A family.

Frankfurt (R.-B.) [21 cases, 2 deaths].

See Arnswalde, 6; Coritten, 3; Calau, 4 (2); Landsberg, 1; and Triebel, 7.—Salmon, 1884, p. 486; gives 10 cases.

—, **R.-B. Frankfurt** [6 cases, 0 death].

Eulenberg, 1882, p. 349: Details not given. Possibly the same as Arnswalde.

Grossbodungen, Kr. Nordhausen, R.-B. Erfurt 2 cases, 0 death.

Richter, 1888, p. 113: See also Bleicherode. *It would appear that the hog was inspected and passed as free from trichinæ.*—Eulenberg, 1882, p. 350.

Gumbinnen (R.-B.) [11 cases, 0 death].

See Angerburg, 3; Crüttinnen, 6; and Ragnit, 2.

Hettstedt, Mansfelder Gebirgskreis, R.-B. Merseburg, February ..

22 cases, 0 death.

Wolff, 1882, p. 9: *The hog was inspected and passed as free from trichinæ.* In 12 preparations afterwards made from this animal, the Kreisphysikus found on an average only one parasite in each slide. Yet under these circumstances, the inspector, who was not present when the samples were taken, was imprisoned three months.—Eulenberg, 1882, p. 350.

Hettstedt, Mansfelder Gebirgskreis, R.-B. Merseburg, June ..

120 cases, 0 death.

Wolff, 1882, p. 9: From two hogs which *were inspected and passed as free from trichinæ.* In the later examination an encapsulated trichina was found on every

third to fifth preparation. The inspector, who was not present when the samples were taken, was imprisoned three months.—Eulenberg, 1882, p. 350: *'The hog was inspected and passed as free from trichinae.'*—Chatin, 1883, p. 140, and R. Blanchard, 1887, p. 139: 150 cases cited, probably referring to both Hettstedt outbreaks.

Hoerde, Landkreis Dortmund, R.-B. Arnsberg (1880–81).....

18 cases, 1 death.

Schönfeld, 1884, pp. 144, 145: *The hog was inspected and passed as free from trichinae.* "In Hoerde, Landkreis Dortmund, erkrankten um Mitte Dezember 1880 8 [18?] Personen, welche rohes Fleisch von einem Schweine, das von einem Metzger Reichardt dortselbst am 11. Dezember geschlachtet worden war, genossen hatten, an Erscheinungen, die bald die Diagnose der Trichinose ergaben. Der Metzger hatte angeblich das Fleisch mit der dreifachen Menge Rindfleisch vermengt 'zum Besten gegeben,' nachdem dasselbe von einem Fleischbeschauer für trichinenfrei befunden worden wäre. Letztere Angabe erwies sich als unwahr, eine Untersuchung von Schweinefleisch dieses Metzgers hatte um jene Zeit überhaupt nicht stattgefunden; Fleischreste des Schweines waren nicht mehr beizubringen. Gleichwohl stellte sich eine andere Quelle der Invasion heraus. Bei der Revision der Fleischbestände des genannten Metzgers wurden Schinken und Speckseiten eines Schweines vorgefunden und als trichinenhaltig festgestellt, welches von einem Schumacher Rhode im October geschlachtet und von dem amtlichen Fleischbeschauer Liessenhoff für trichinenfrei erklärt worden war. Rhode war am 2. Novbr. drei erwachsene Kinder desselben waren am 16., 17. und 22. desselben Monats—nach der standesamtlichen Registrirung der Erstere an 'Schwindsucht,' die Letzteren an 'Nervenfieber'—gestorben. Eine der Leichen wurde exhumirt und es wurde an derselben durch legale Obduction Trichinose als Todesursache festgestellt. Theile desselben Schweines waren dem 2c. Reichardt zum Räuchern übergeben worden, letzterer hatte abgeschnittene Stücke derselben in seinen Nutzen verwendet und dadurch die Dezember-Erkrankungen verursacht. Es waren deren 18, unter ihnen die des 2c. Reichardt selbst. Nur eine derselben endete lethal am 11. Januar 1881. Liessenhoff, der nach Feststellung der Schuld sofort seines Amtes als Fleischbeschauer entsetzt worden, wurde durch Erkenntniss der Strafkammer des Königlichen Landgerichts zu Dortmund vom 19. October 1881 zu 6, 2c. Reichardt zu 3 Monaten Gefängniss verurtheilt und wurde die seitens der Verurtheilten eingelegte Revision verworfen."—Ann. d. M. P., 1881, p. 377.—R. Blanchard, 1887, p. 139: 13 cases.—Chatin, 1883, p. 140.

Königsberg (R.-B.)..... [3 cases, 1 death].

See Fischhausen.

Landsberg, R.-B. Frankfurt..... 1 case, 0 death.

Pistor, 1883, p. 44.

Linden, Landkreis Bochum, R.-B. Arnsberg..... 6 cases, 0 death.

Schönfeld, 1884, p. 145: *The hog was inspected and passed as free from trichinae* by "amtlichem Fleischbeschauer Wieg."

Löberitz, Kr. Bitterfeld, R.-B. Merseburg, November. 4 cases, 0 death.

Wolff, 1882, p. 9: *The hog was inspected and passed as free from trichinae.* The inspector had examined 25 preparations without finding any worms.—Eulenberg, 1882, p. 350.

Marienwerder (R.-B.)..... [3 cases, 0 death].

Official sanitary report not accessible. See, however, Stuhm, 3.

Merseburg (R.-B.)..... [148 cases, 1 death].

See Hettstedt, 22, 120; Löberitz, 4; Schona, 2.

Wolff, 1882, p. 9: States 151 cases occurred. I can find only 148 cases.—Salmon, 1884, p. 486: 148 cases,

Münster (R.-B.) [1 case, 0 death].

See Werne.

Naugard, R.-B. Stettin 4 cases, 0 death.

Eulenberg, 1882, p. 349.—Weiss, 1883, p. 65: *The hog was inspected and passed as free from trichinæ.* "Dagegen wurde ein Fleischbeschauer zu Naugard durch rechtskräftig gewordenen Erkenntniss des Landgerichts zu Stargard vom 16. Juni v. J. wegen fahrlässiger Körperverletzung unter Vernachlässigung seiner Berufspflichten mit 1 Monat Gefängniss nebst Kostenauflegung verurtheilt, weil er nachweislich nicht, wie vorgeschrieben die Zwischenrippen-, Zungenwurzel-, Augen- und Hals-Muskeln eines am 3. Dezbr. 1880, geschlachteten Schweines untersucht hatte, und in Folge des genossenen Fleisches 4 Personen etwa 3 Wochen an Trichinosis bettlägerig krank geworden waren."—Salmon, 1884, p. 486.

Neu-Ruppin, R.-B. Potsdam 2 cases, 0 death.

Kanzow, 1884, p. 41: Kanzow states that the hog was "rechtzeitig" inspected and found to be trichinous, and adds that these two persons probably ate the pork at the time the animal was slaughtered.

Obern timer (Kreis), R.-P. Posen 10 cases, 0 death.

Gemmel, 1883, p. 17: Several places were involved. The hogs were slaughtered for home consumption and were evidently not examined; exact number of cases not given. Gemmel also intimates that cases occur which do not come to the knowledge of physicians.—Eulenberg, 1882, p. 349: Number not given.

Posen (R.-B.) [20 cases, 0 death].

See Obern timer, 10; and Posen (Stadt), 10.

Posen (Stadt), R.-B. Posen 10 cases, 0 death.

Gemmel, 1883 A, p. 17: The butcher was imprisoned. The exact number of cases in this epidemic is not given. Gemmel refers to it as a case of "Massenerkrankungen," but in "mässigem Umfange."

Potsdam (R.-B.) [5 cases, 0 death].

See Neu-Ruppin, 2; and Zehlendorf, 3.

Ragnit (Kr.), R.-B. Gumbinnen 2 cases, 0 death.

Passauer, 1882, p. 104.

Rotenburg, R.-B. Cassel, March 26 cases, 0 death.

Rockwitz, 1888, p. 233: *The hog was inspected and passed as free from trichinæ.* The butcher slaughtered 7 hogs, all of which were passed. Afterwards the disease broke out and was traced to a certain animal. The Kreisphysikus examined 200 preparations from what remained and found trichinæ in only 5 of them. The inspector was acquitted.

Schona, Kr. Schweinitz, R.-B. Merseburg, December 2 cases, 1 death.

Wolff, 1882, p. 9: *The hog was inspected and passed as free from trichinæ.* The Kreisphysikus afterwards examined the muscles of the eye and found 4 parasites in the first 5 preparations; in the next 15 slides none were found; in 20 other preparations examined by another party none were found; in 100 preparations made from other parts of the body, 12 trichinæ were found. The inspector had examined 15 preparations and found no parasites. Patient died January 3, 1882. The inspector was fined 30 marks and imprisoned six days.—Eulenberg, 1882, p. 350: *The hog was inspected and passed as free from trichinæ.* Afterwards 12 trichinæ were found in 100 preparations.

Steinbach-Hallenberg, Kr. Schmalkalden, R.-B. Cassel, March . . .	15 cases, 0 death.
Rockwitz, 1888, p. 233: <i>The hog was inspected and passed as free from trichinæ.</i>	
Stettin, (R.-B.)	[4 cases, 0 death].
See Naugard.	
Stuhm, R.-B. Marienwerder	3 cases, 0 death.
Eulenberg, 1882, p. 349: Imported [from where?]. Cervelat sausage.—Salmon, 1884, p. 486.	
Triebel, R.-B. Frankfurt	7 cases, 0 death.
Pistor, 1883, p. 44.	
Wahlerhausen, Kr. Cassel, R.-B. Cassel	8 cases, 0 death.
Rockwitz, 1888, pp. 223-234: Source of meat not known.	
Werne, R.-B. Münster	1 case, 0 death.
Hoogeweg, 1882, p. 59: Contracted in Arnberg; details insufficient.	
Zehlendorf, R.-B. Potsdam	3 cases, 0 death.
Kanzow, 1884, p. 41: "Several" cases. Source of meat could not be traced.	

1882: 209 cases, 6 deaths.

Summary for the year.—In a total of 209 cases, 6 deaths, 42 cases, 2 deaths, appear to have been *due to pork which was inspected and passed as free from trichinæ*; besides these, 8 cases, 1 death, may have been due to inspected pork, but there is some doubt regarding the facts; 89 cases were due to condemned meat; no cases are attributed to American pork.

No official or other sanitary reports for 1882 are accessible for the following *Regierungs-Bezirke*: Aachen, Aurich, Coblenz, Danzig, Düsseldorf, Frankfurt, Hannover, Liegnitz, Magdeburg, Osnabrück.

No cases of trichinosis in man for 1882 were found in the official sanitary reports or from other sources for the following *Regierungs-Bezirke*: Arnberg (Schönfeld, 1884), Bromberg (Strahler, 1883), Coeslin (Massenbach, 1884), Lüneburg (Alten, 1884, p. 52), Marienwerder (Pianka, 1884, p. 25), Minden (Schultz-Hencke, 1884, p. 58), Münster (Hoogeweg, 1883), Oppeln (Noack, 1884), Potsdam (Kanzow, 1884, p. 76), Schleswig-Holstein (Bockendahl, 1883, p. 13), Sigmaringen (Koch, 1887), Stade (Bohde, 1883 B, p. 29), Stettin (Weiss, 1884), Trier (Schwartz, 1884, p. 48), Wiesbaden (Wagner [1883], p. 39).

Berlin, June 3 cases, 0 death.

Eulenberg, 1883, p. 338: *It was claimed that the hog was inspected and passed as free from trichinæ*, but Eulenberg thinks this claim doubtful.—Pistor, 1884, p. 106: It was claimed that the hog was brought into the city from the outside and was provided with an inspection stamp, but this could not be proven. "So far as known, in this year also no cases of trichinosis occurred as a result of eating American ham."—Salmon, 1884, p. 486.—Ostertag, 1899, p. 497.

Breslau (R.-B.) [7 cases, 1 death].

See Floriansdorf, 1 (1); and Karzen, 6.

Cassel (R.-B.) [35 cases, 0 death].

See Deissel, 4; Naumburg, 12; Meimbressen, 1; Rotenburg, 6; and Vaake, 12.

- Cologne (R.-B.)** [89 cases, 0 death].
See Cologne (Stadt), 89.
- Cologne, R.-B. Cologne, June** 89 cases, 0 death.
Schwartz, 1883, pp. 33-35: 89 cases, 0 death; among the troops; *hog had been condemned, but was sold and eaten without proper precautions.*—Eulenberg, 1883, p. 338; 60 cases; Westph. Infanterie 16; *hog was known to be trichinous.*—Chatin, 1883, p. 140.—Salmon, 1884, p. 486: 60 cases.—R. Blanchard, 1887, p. 139.
- Deissel, Kr. Hofgeismar, R.-B. Cassel** 4 cases, 0 death.
Rockwitz, 1888, p. 234: Home-slaughtered hog. Not inspected.
- Erfurt (R.-B.)** [15 cases, 1 death].
See [Freihagen, 10 (1)]; Heiligenstadt, 5; and Siebergsmühle, 10 (1).
- Floriansdorf, Kr. Schweidnitz, R.-B. Breslau** 1 case, 1 death.
Wolff, E., 1884, p. 19: *The hog was inspected and passed as free from trichinæ.*
- Freihagen, R.-B. Erfurt** [10 cases, 1 death].
Eulenberg, 1883, p. 339: *The hog was inspected and passed as free from trichinæ.*
Probably the same as Siebergsmühle.
- Freiheit b. Osterode, R.-B. Hildesheim** 7 cases, 0 death.
Wittichen, 1884, p. 30: Diagnosis from symptoms.
- Glandau bei Landsberg, Kr. Eylau, R.-B. Königsberg**
5 cases, 0 death.
Nath, 1885, p. 115: Hog not inspected. It is not clear from the report whether this outbreak was in 1881, 1882, or 1883.
- Gumbinnen (R.-B.)** [24 cases, 2 deaths].
See Lyck, 6; Oletzko, 15 (2); Rauben, 3.
- Heiligenstadt, R.-B. Erfurt, December** 5 cases, 0 death.
Eulenberg, 1883, p. 338.—Salmon, 1884, p. 486: 4 cases.—Richter, 1888, p. 114: The source of infection could not be definitely determined, it is stated, although it is also stated that all patients had eaten raw meat of a hog slaughtered on November 30. In the remaining meat no trichinæ were found. Diagnosis made on symptoms. It is not stated whether the meat was inspected.
- Hildesheim (R.-B.)** [7 cases, 0 death].
See Freiheit, 7.
- Karzen, Kr. Nimptsch, R.-B. Breslau** 6 cases, 0 death.
Wolff, E., 1884, pp. 19, 69: Hog had not been inspected.
- Königsberg (R.-B.)** [14 cases, 0 death].
See Glandau, 5; Wehlau, 6; Wormditt, 3.
- Lyck (Kr.), R.-B. Gumbinnen** 6 cases, 0 death.
Passauer, 1883, p. 101: "Several" cases in two families. The hog had not been inspected.
- Meimbressen, Kr. Hofgeismar, R.-B. Cassel** 1 case, 0 death.
Rockwitz, 1888, p. 234: Hog slaughtered on Rittergut Hohenborn and not inspected.
- Merseburg (R.-B.)** [7 cases, 0 death].
See Wansleben, 7.
- Naumburg, Kr. Wolfhagen, R.-B. Cassel, November** 12 cases, 0 death.
Rockwitz, 1888, p. 234: *The hog was inspected and passed as free from trichinæ.*
Afterwards, the Kreisphysikus examined 72 preparations and found only 16 trichinæ. Twenty-one preparations examined in succession failed to show the parasites.

- Oletzko (Kr.), R.-B. Gumbinnen** 15 cases, 2 deaths.
 Passauer, 1883, p. 101: Details not given.
- Posen (R.-B.)** [5 cases, 1 death].
 See Posen (Stadt), 5 (1).
- Posen, R.-B. Posen** 5 cases, 1 death.
 Gemmel, 1883b, pp. 20, 21: Probably portions of more than 2 hogs were used in preparing the sausage. *One of these hogs was evidently inspected and passed as free from trichinæ.* The second hog could not be definitely determined. Some other meat was also used which was sent into the city from the outside. The case therefore remains unexplained. A family with boarders was taken sick. Exact number of cases not given. One death.
- Posen, R.-B. Posen** [3? cases, 0 death].
 Eulenberg, 1883, p. 338: "Several" cases. This reference may belong to the preceding outbreak.
- Prohn, R.-B. Stralsund** 3 cases, 1 death.
 Koehler, 1884, pp. 38, 52: Patient had eaten raw meat while making sausage; taken to hospital in Stralsund. Hog had not been inspected. Trichinæ found in woman on postmortem.
- Rauben, Kr. Insterburg, R.-B. Gumbinnen, March** .. 3 cases, 0 death.
 Passauer, 1883, p. 101: Sausage (Rauchwurst).
- Rotenburg, R.-B. Cassel** 6 cases, 0 death.
 Rockwitz, 1888, p. 234: *The hog was inspected and passed as free from trichinæ. Same inspector had passed another trichinous hog in same town in 1881.* The inspector was acquitted upon the opinion submitted by Professor Raabe, of Hannover, that even with the most expert (gewissenhaftesten) examination of the meat, trichinæ may be overlooked.
- Siebergsmühle, Kr. Heiligenstadt, R.-B. Erfurt, December** ..
 10 cases, 1 death.
 Richter, 1888, pp. 113, 114: *The hog was inspected and passed as free from trichinæ.* The Kreisphysikus afterwards found numerous trichinæ present.
- Stettin (Stadt? or R.-B. ?)** [5 cases, 0 death].
 Zeitschr. f. Fleischbeschau u. Fleischprod., 1887, II (8), May, p. 99: "Im Januar 1882 erkrankten in Stettin 5 Personen nach dem Genuß von Fleischbröckchen, welche aus Rind- und Schweinefleisch in ungepökeltem und ungeräuchertem Zustande hergestellt waren. Bei sämtlichen Erkrankten tratt Genesung ein." It seems very probable that this reference is to the 1885 outbreak.
- Stralsund (R.-B.)** [3 cases, 1 death].
 See Prohn, 3 (1).
- Vaake, Kr. Hofgeismar, R.-B. Cassel** 12 cases, 0 death.
 Rockwitz, 1888, p. 234: Home-slaughtered hog; not inspected.
- Wansleben, Mansfelder See Kreis, R. B. Merseburg, December** ..
 7 cases, 0 death.
 Wolff, 1883, p. 11: *The hog was inspected in November and passed as free from trichinæ.* After two persons had been taken sick the meat was reexamined, and, though a large number of preparations was made, only a few trichinæ were found.—Eulenberg, 1883, p. 338: 4 cases, 0 death. *The hog was inspected and passed as free from trichinæ.*—Salmon, 1884, p. 486: 4 cases.

Wehlau, R.-B. Königsberg 6 cases, 0 death.

Nath, 1885, p. 116: *The hog was inspected and passed as free from trichinæ.* Exact date not clear—1881, 1882, or 1883.

Wormditt, Kr. Braunsberg, R.-B. Königsberg 3 cases, 0 death.

Nath, 1885, pp. 115, 116: *Trichina* inspection is obligatory here, but this outbreak is not explained. "Entire family" taken sick. Exact date not clear—1881, 1882, or 1883.

1883: 637 cases, 71 deaths.

Summary for the year.—In a total of 637 cases, 71 deaths, 478 cases, 66 deaths, are stated to have been *due to meat which was inspected and passed as free from trichinæ.* Besides these 478 cases, at least 43 cases may have been due to inspected meat. One case at Cologne, alleged to have been due to American pork, can not be traced, unless it refers to a cat in which *trichinæ* were found. The Emersleben outbreak is of historic interest. The 20 cases of Strelno were due to meat known to be trichinous, but used in making sausage without being properly safeguarded. In 1883 the exclusion of American pork was decreed.

Official sanitary or other reports for 1883 are not accessible to the author for the Regierungs-Bezirke Breslau and Hildesheim.

No cases of trichinosis in man for this year were found in the official health reports or elsewhere for the following Regierungs-Bezirke: Aachen (Trost, 1887, pp. 49, 56), Arnsberg (Katerbau, 1888, p. 121), Aurich (Rapmund, 1887, p. 142), Cassel (Rockwitz, 1888, p. 35), Coblenz (Massenbach, 1887, p. 61), Danzig (Zeuschner, 1887), Düsseldorf (Weiss, 1888), Frankfurt a. O. (Wiebecke, 1888, p. 36), Hannover (Becker, 1887), Liegnitz (Philipp, 1886), Lüneburg (Alten, 1887, p. 64), Minden (Schultz-Hencke, 1887, p. 73), Münster (Hölker, 1887, p. 51), Oppeln (Noack, 1887, p. 102), Osnabrück (Bitter, 1888), Posen (Gommel, 1887, p. 14), Schleswig-Holstein (Bockendahl, 1887, p. 153), Sigmaringen (Koch, 1887), Stade (Bohde, 1887, p. 126), Stettin (Dieterich, 1887, p. 137), Stralsund (Koehler, 1887, p. 85), Trier (Schwartz, 1887), Wiesbaden (Wagner, 1886).

Berge bei Forst, R.-B. Frankfurt [1 case, 0 death].

Eulenberg, 1885, p. 310: See Forst sub 1884.

Berlin [6 cases, 1 death].

See separate outbreaks.

Berlin, January 1 case, 1 death.

Veröff., 1883, VII (4), p. 15: Hospital; January 7–13; patient between 31 and 60 years old.—Veröff., 1883, VII (7), p. 29: Died January 28–February 3.—Eulenberg, 1885, p. 134: Krankenhaus Friedrichshain.—Pistor, 1887, p. 240: Source of infection not traced. Death January 30.

Berlin, April–June 1 case, 0 death.

Veröff., 1883, VII (20), p. 103: Hospital; April 28–May 5; patient between 16 and 30 years old.—Veröff., 1883, VII (38), p. 213: April 1–June 30.

Berlin, November 7 2 cases, 0 death.

Eulenberg, 1885, p. 134.—Pistor, 1887, pp. 240, 241: Noncommissioned officer and his wife. Source of infection could not be traced.

Berlin, November–December 1 case, 0 death.

Pistor, 1887, p. 241: Servant E. S. in Bethanien Hospital; November 23, 1883, to January 29, 1884. Meat could not be traced.

- Berlin** 1 case, 0 death.
 Pistor, 1887, p. 241: A case was recorded in the daily papers, but it could not be traced by the authorities, as the person was not registered with the police.
- Berlin** [4 cases, 0 death].
 Pistor, 1887, p. 240: Four doubtful cases, probably not trichinosis.
- Bromberg (R.-B.)** [20 cases, 2 deaths].
 See Strelno.
- Coeslin (R.-B.)** [1 case, 0 death].
 See Rummelsburg.
- Cologne (R.-B.)** [35 cases, 0 death].
 See Cologne (Stadt).
- Cologne, R.-B. Cologne, February** 35 cases, 0 death.
 Schwartz, 1884, p. 27.—Eulenberg, 1885, p. 135: *The hog had been inspected and passed as free from trichinæ.*
- Cologne, R.-B. Cologne** [1 case, ? death].
 See p. 173.
- Emersleben, Deesdorf, Nienhagen, R.-B. Magdeburg, September-December** 403 cases, 66 deaths.
 Brouardel, 1883, p. 1504: Extensive account to French Academy of Medicine: "Il aurait été examiné par le boucher et par l'inspecteur d'Emersleben, qui déclarèrent qu'il ne contenait pas de trichine. La bonne foi de ces deux personnes est hors de doute, car toutes deux mangèrent de la viande de ce porc et toutes deux furent malade."—Wagner, 1884, pp. 5, 6: "Sämmtliche 4 Schweine sind angeblich von dem gleichfalls in Emersleben ansässigen Fleischbeschauer untersucht und für trichinenfrei befunden worden. Abgesehen davon, dass in unserm Falle die Schweine gar nicht untersucht sein können, da sonst Trichinen hätten gefunden werden müssen¹ eine Ansicht, welche die in jener Gegend ansässigen Herren Aerzte theilten, liegt die Gefahr in zwei anderen Punkten: Ersten kann ein Fleischbeschauer wenn er die gesetzlich vorgeschriebene Prüfung in der Ausübung seines Amtes bummeln. So consultierte ein Fleischbeschauer Herrn Dr. Philipp wegen seines Mikroskopes, welches seit längerer Zeit nicht in Ordnung sei. Was fehlt dem Mikroskop? Die Objectivlinsen!"—Salmon, 1884, p. 486; 377 cases, 61 deaths.—Lesserhaft, 1885, p. 528: *The hog was inspected and passed as free from trichinæ.* "Das betreffende Schwein, von dem die Infection ausging, war sowohl von dem Fleischer als auch von dem gesetzlich angestellten Fleischbeschauer für trichinenfrei erklärt worden."—Von Madai, 1885, p. 528: 403 cases, 66 fatal; police statistics.—Voigt, 1887, p. 94: 270 cases, 53 deaths, in Emersleben; 133 cases, 13 deaths in surrounding places. "Wie auch in dem Emerslebener Fall beim Beginn der gerichtlichen Untersuchung das Fleisch des trichinösen Schweines bereits lange vorher beseitigt und die Identität desselben mit dem in dem Fleischbuche des Fleischbeschauers eingetragenen, nicht mit Sicherheit festgestellt war."—Veröff., 1889, p. 110: 403 cases, 66 deaths. "Kleine derartige Epidemien ohne Todesfall kamen an vier anderen Orten vor."—R. Blanchard, 1887, p. 137.—Mosler & Peiper, 1894, p. 305: "Als beklagenswerthe, aber immerhin doch vereinzelte Vorkommnisse sind die Epidemien, welche im Jahre 1883 in

¹"Die Königliche Staatsanwaltschaft zu Halberstadt theilt diese Meinung nicht. Der betreffende Fleischbeschauer * * * das eine war in der Voruntersuchung nachgewiesen und durch die Geständnisse des Fleischers und Fleischbeschauers bestätigt, dass sie ihre Bücher nachträglich vervollständigt haben, was jedenfalls eine Nachlässigkeit ihrerseits beweist."

Emersleben und Nienhagen durch ein Schwein hervorgerufen wurden, welches von dem amtlichen Fleischschauern für trichinenfrei erklärt worden war, anzusehen; 350 Personen erkrankten, 42 erlagen der Trichinosis. In Niederspier brach 1877 eine Epidemie aus, veranlasst durch ein Schwein, in welchem der Fleischbeschauer keine, Dr. Nicolai erst in circa 200 Präparaten zwei Muskeltrichinen nachwies."

Thus in connection with this outbreak accounts differ as to whether the hog was actually inspected for trichinae, i. e., as to whether portions of the meat were actually under the microscope. When we read the statements given above by Wagner and the account of the condition of the inspectors in R.-B. Magdeburg by Voigt (see p. 116), we must conclude that it is perfectly possible that the inspector examined the hog. Whether he was *capable* of making a proper examination or not is an entirely different question.

Erfurt (R.-B.) [9 cases, 0 death].

See Mühlhausen.

Fischhausen (Kr.), R.-B. Königsberg, October–November

15 cases, 0 death.

Nath, 1885, p. 115.

Groitsch, Saalkreis, R.-B. Merseburg, December 25, 1882–January, 1883 3 cases, 0 death.

Wolff, 1887, p. 88: Raw bratwurst. *The hog had been inspected and passed as free from trichinae. The same inspector passed a second trichinous hog about January 9, 1883.*—Eulenberg, 1885, p. 134.

Gumbinnen (R.-B.) [10 cases, 0 death].

See Tilsit.

Guttstadt, Kr. Heilsberg, R.-B. Königsberg, January–March

8 cases, 1 death.

Nath, 1885, pp. 115, 116: Two families, in one of which there were 5 persons; in the other, 3 patients; a home-fed hog, which was not inspected.

Halle a. S., R.-B. Merseburg, January 5 cases, 0 death.

Wolff, 1887, p. 88: Hams came from Schafstedt. *The hog (slaughtered December 29, 1882) had been inspected and passed as free from trichinae. Same hog caused 4 cases in Schafstedt. Inspector forced to resign.*—Eulenberg, 1885, p. 134.

Halle a. S., R.-B. Merseburg, September 8 cases, 0 death.

Wolff, 1887, p. 88: *The butcher claimed that the hog had been inspected and passed as free from trichinae, but the inspector advanced the claim that he could not have inspected the hog and missed the trichinae, since he was always careful about his work.*—Eulenberg, 1885, p. 134: "Bei der Vernehmung gab letzterer [the butcher] an, dass seine sämtlichen Schweine von Fleischbeschauer S. auf Trichinen untersucht wurden und bewies die Richtigkeit seiner Behauptung, durch Vorlegung des Schlachtbuches. Der Fleischbeschauer erklärte seinerseits, dass er die Untersuchungen stets mit der grössten Gewissenhaftigkeit vorgenommen habe. Das Fleisch, welches die Trichinen enthalten habe, sei daher jedenfalls nicht von ihm untersucht. * * * Bei der Gutartigkeit der Erkrankungen erschien es sogar wahrscheinlich, dass das betreffende Schwein so wenig mit Trichinen durchsetzt war, dass dieselben selbst bei einer gewissenhaften Untersuchung unentdeckt bleiben konnten."

Königsberg (R.-B.) [23 cases, 1 death].

See Fischhausen, 15; and Guttstadt, 8 (1).

Magdeburg (R.-B.) [426 cases, 66 deaths].

See Emersleben, 403 (66); and Wernigerode, 23.

- Marienwerder (R.-B.)** [59 cases, 1 death].
 See Thorn. Reiche (1887, pp. 34, 35) gives no cases for this year under Zoonosen, but Eulenberg (1885, p. 134) cites 59 cases, 1 death, in Thorn and vicinity.
- Merseburg (R.-B.)** [40 cases, 0 death].
 Veröff., 1888, p. 229.—Eulenberg, 1885, p. 134.—See Groitsch, 3; Halle, 5, 8 [Saalkreis]; Schafstedt, 4; and Walbeck, 20.
- Mühlhausen, R.-B. Erfurt** 9 cases, 0 death.
 Richter, 1888, p. 114: Meat was eaten before the hog was inspected. The inspector found trichinæ present. Wife of the butcher was imprisoned for four weeks.
- Plauen a. H., R.-B. Potsdam** 5 cases, 0 death.
 Kanzow, 1887, p. 44: Hog slaughtered for home use and not inspected. Afterwards trichinæ were found in meat.
- Potsdam (R.-B.)** [8 cases, 0 death].
 See Plauen a. H., 5; Templin, 3.
- Rummelsburg, R.-B. Coeslin** 1 case, 0 death.
 Wernich, 1887, p. 163: A woman tasted of meat while making sausage. The hog was afterwards found to be trichinous.
- Saalkreis, R.-B. Merseburg** [3 cases, 0 death].
 Eulenberg, 1885, p. 133: *The hog had been inspected and passed as free from trichinæ. The same inspector passed another hog as free from trichinæ in which another inspector found the parasites. This is probably the same as Groitsch.*
- Schafstedt, R.-B. Merseburg, January** 4? cases, 0 death.
 Wolff, 1887, p. 88: *Hog had been inspected and passed as free from trichinæ. See also Halle. Husband, wife, and "children."*—Eulenberg, 1885, p. 134.
- Strelno and vicinity, R.-B. Bromberg** 20 cases, 2 deaths.
 Strahler, 1887, p. 56: *The meat had been inspected and was known to contain trichinæ, but the butcher used it in sausage.*
- Templin, R.-B. Potsdam** 3 cases, 0 death.
 Kanzow, 1887, p. 44: Entire family (3?); early in the year. The hog was slaughtered for home use and was not inspected. Afterwards trichinæ were found.
- Thorn and vicinity, R.-B. Marienwerder** 59 cases, 1 death.
 Eulenberg, 1885, pp. 133, 134: Stadt Thorn, 48 cases, 1 death; Kreis Thorn, 11 cases.
- Tilsit, R.-B. Gumbinnen, March** 10 cases, 0 death.
 Passauer, 1887, p. 142: In the garrison. *It was suspected that the meat had been inspected and passed as free from trichinæ, but this was not proved.*
- Walbeck, near Hettstedt, R.-B. Merseburg, October**
 20 cases, 0 death.
 Eulenberg, 1885, p. 135: *The hog had been inspected and passed as free from trichinæ.*—Wolff, 1887, pp. 88, 89: In 50 preparations which were afterwards made, no trichinæ were found.
- Wernigerode, R.-B. Magdeburg** 23 cases, 0 death.
 Voigt, 1887, p. 94: Evidently several epidemics; details not given. Identification of meat with inspected meat was not proved, as all the meat was gone.

1884: 348 cases, 29 deaths.

Summary for the year.—In a total of 348 cases, 29 deaths, 157 cases, 12 deaths, appear to have been *due to pork which was inspected and passed as free from trichinæ*. One case, 1 death (Breslau), was due to meat which was condemned and sent to the rendering establishment, but was eaten. Ten cases (Kobylepole) were due to meat which should have been inspected but was not.

Official or other reports for 1884 are not accessible for the Regierungs-Bezirk Hildesheim.

No cases of trichinosis in man for this year were found in the official health reports or elsewhere for the following Regierungs-Bezirke: Aachen (Trost, 1887, pp. 49, 56), Arnsberg (Katerbau, 1888, p. 121), Aurich (Rapmund, 1887, p. 142), Coblenz (Massenbach, 1887, p. 61), Coeslin (Wernich, 1887, p. 163), Cologne (Schwartz, 1887), Danzig (Zeuschner, 1887), Düsseldorf (Weiss, 1888, p. 95), Erfurt (Richter, 1888, p. 114), Hannover (Becker, 1887), Liegnitz (Philipp, 1886), Lüneburg (Alten, 1887, p. 64), Minden (Schultz-Hencke, 1887, p. 73), Münster (Hölker, 1887, p. 51), Osnabrück (Bitter, 1888), Schleswig-Holstein (Bockendahl, 1887, p. 153), Sigmaringen (Koch, 1887), Stade (Bohde, 1887, p. 126), Stettin (Dieterich, 1887, p. 137), Stralsund (Koehler, 1887, p. 85), Trier (Schwartz, 1887), Wiesbaden (Wagner [1886]).

Ahrensfelde, Kr. Niederbarnin, R.-B. Potsdam 6 cases, 0 death.

Kanzow, 1887, p. 62: Hog was slaughtered for home use and was not inspected. Later examination showed it to be trichinous.

Barraginn, Kr. Gerdauen, R.-B. Königsberg 5 cases, 1 death.

Nath, 1887, pp. 50, 51: Details not given.

Bartenstein, Kr. Friedland, R.-B. Königsberg 6 cases, 0 death.

Nath, 1887, pp. 50, 51: Meat was not inspected.

Belleben and Alsleben, Mansfelder Gebirgskreis, Merseburg, May 4 cases, 0 death.

Eulenberg, 1885, p. 309: See also Strenz-Naundorf. *The hog was inspected and passed as free from trichinæ.*

Belleben, Mansfelder Gebirgskreis, R.-B. Merseburg, December 2 cases, 0 death.

Eulenberg, 1885, p. 309: *The hog had been inspected and passed as free from trichinæ.* Eulenberg also reports 3 other cases from this district. See Leimbach.—Wolff, 1887, p. 89.

Berlin [At least 10 cases, 1 death].

See separate entries.

Berlin, January 2 cases, 0 death.

Pistor, 1887, p. 241: Widow K. R. and daughter. Probably due to meat sent from Potsdam, since the wife of the person who sent the meat was also taken sick with trichinosis. See Potsdam.—Eulenberg, 1885, p. 310. December 25, 1883.

Berlin [1 case, 0 death].

Pistor, 1887, p. 241: Servant E. S.—Eulenberg, 1885, p. 310: December 29, 1883. Krankenhaus Bethanien. See Berlin, 1883.

Berlin, March 23–29 1 case, 0 death.

Veröff., 1884, VIII (14), p. 65: Hospital; patient between 16 and 30 years old.

- Berlin, April 20-26** 4 cases, 1 death.
Veröff., 1884, VIII (18), p. 85: Hospital; one patient between 6 and 15 years old; one between 16 and 30 years old; two between 31 and 60 years old.—Veröff., 1884, VIII (22), p. 109: Death between May 18-24.
- Berlin, June 8-14** 1 case, 0 death.
Veröff., 1884, VIII (25), p. 123: Hospital; patient between 16 and 30 years old.
- Berlin, June 15-21** 1 case, 0 death.
Veröff., 1884, VIII (26), p. 127: Hospital; patient between 16 and 30 years old.
- Berlin, November 2-8** 1 case, 0 death.
Veröff., 1884, VIII (46), p. 227: Hospital; patient between 2 and 5 years old.
- Birnstein and Fischborn, Kr. Gelnhausen, R.-B. Cassel**
5 cases, 0 death.
Rockwitz, 1888, p. 235: *The hog was inspected and passed as free from trichinæ.*
- Breslau (R.-B.)** [4 cases, 1 death].
See Breslau, 1 (1); and Nicolaivorstadt, 3.
- Breslau, R.-B. Breslau** 1 case, 1 death.
Wolff, E., 1887, p. 56: *The hog had been condemned and sent to the rendering establishment. A part of it was eaten and resulted in one death.*
- Bromberg (R.-B.)** [11 cases, 0 death].
See Gnesen, 3; and Wirzitz, 8.
- Burdungen, Kr. Neidenburg, R.-B. Königsberg** 16 cases, 2 deaths.
Nath, 1887, pp. 50, 51: See also Ortelsburg; Rauchwurst, home-slaughtered.
- Cassel (R.-B.)** 51 cases, 0 death.
See Birnstein, 5; Grosswidén, 6; and Schmalkalden, 40.
- Fischborn, Gelnhausen, R.-B. Cassel.**
See Birnstein.
- Forst, R.-B. Frankfurt a. O** 1 case, 0 death.
Eulenberg, 1885, p. 310: Meat not inspected. End of 1883. Eulenberg adds that unfortunately not all cases of trichinosis are recorded, but that it may be assumed that a very large number remain unknown: "*Leider gelangen nicht alle Fälle von Erkrankungen zur Anzeige; man kann viel mehr annehmen, dass eine weit grössere Menge derselben unbekannt bleibt.*"
- Frankfurt a. O. (R.-B.)** [2 cases, 0 death].
See Forst, 1; and Sorau, 1.
Wiebecke, 1888, p. 36: Apparently mentions no cases in his official report for 1884.
- Gerdauen, Kr. Gerdauen, R.-B. Königsberg** 1 case, 0 death.
Nath, 1887, pp. 50, 51: Five others ate of same meat, but not taken sick; further details lacking.
- Gleichwitz (Kr.), R.-B. Oppeln** 3? cases, 0 death.
Noack, 1887, p. 102: Details not given. Outbreaks in 1884 and 1885.
- Gnesen (Kr.), R.-B. Bromberg** 3 cases, 0 death.
Strahler, 1887, p. 56: A peasant family. Meat had not been inspected.
- Graudenz (Kr.), R.-B. Marienwerder** 7 cases, 3 deaths.
Eulenberg, 1885, p. 310: Source of meat not known.

Gross- und Kleinwieden, Kr. Rinteln, R.-B. Cassel. 6 cases, 0 death.

Rockwitz, 1888, p. 235: *Hog was evidently inspected and passed as free from trichinae*, as the microscopist was imprisoned six months because he took only two samples.

Gumbinnen (R.-B.) [13 cases, 0 death].

See Insternburg, 1; and Sensburg, 12.

Guttstadt, Kr. Heilsberg, R.-B. Königsberg 2 cases, 0 death.

Nath, 1887, pp. 50, 51: *The hog was inspected and passed as free from trichinae*. In further microscopic examination 20 preparations were made and only two trichinae were found.

Halberstadt, R.-B. Magdeburg 3½ cases, 0 death.

Voigt, 1887, p. 94: Exact number of cases not given: "In einer Familie." *The meat was evidently inspected and passed as free from trichinae*, as the inspector was fined: "der untersuchende Fleischbeschauer zu einer empfindlichen Geldbuse verurtheilt wurde."

Havelberg, R.-B. Potsdam, November 20 cases, 0 death.

Kanzow, 1887, p. 61: Kanzow says that the butcher's books were not found in good order. Lightly smoked "Schlachtwurst." Nothing stated to show whether the hog was inspected or not, but the inspectors in the city were reexamined and all passed the examination.

Insternburg (Kr.), R.-B. Gumbinnen 1 case, 0 death.

Passauer, 1887, p. 142: Exact date (1883, 1884, or 1885) not given. No data known.

Kobylepole, Landkr. Posen, R.-B. Posen 10 cases, 0 death.

Gammel, 1887, pp. 14, 18: The hog should have been inspected, but it was not. The owner was imprisoned three days. Gammel says that this is the only outbreak officially known.

Königsberg (R.-B.) [50 cases, 9 deaths].

See Barraginn, 5 (1); Bartenstein, 6; Burdungen, 16 (2); Gerdauen, 1; Guttstadt, 2; Königsberg, 18 (6); and Ortelsburg, 2.

Königsberg, R.-B. Königsberg, spring 18 cases, 6 deaths.

Nath, 1887, pp. 50, 51: In the suburb Nassen Garten, at Easter. Hog killed in February. Patients died between April 19 and May 23.

Leimbach, Mansfelder Gebirgskr., R.-B. Merseburg

3 cases, 0 death.

Wolff, 1887, p. 89: Disease contracted in Andreasberg, R.-B. Hildesheim.—Eulenberg, 1885, p. 309.

Luckenwalde, R.-B. Potsdam, May 5 cases, 0 death.

Kanzow, 1887, p. 61: *The hog was inspected and passed as free from trichinae*. Dr. Günther afterwards examined some of the meat, but found no parasites until the twenty-fourth preparation.

Magdeburg (R.-B.) 10 cases, 0 death.

See Halberstadt, 3; and Wolmirsleben, 7.

Marienwerder (R.-B.) [34 cases, 5 deaths].

See Graudenz, 7 (3); Niederzehren, 10 (1); and Melno, 17 (1).

Melno, Kr. Graudenz, R.-B. Marienwerder 17 cases, 1 death.

Reiche, 1887, p. 35: Investigation negative. Source of meat not discovered.

- Merseburg (R.-B.)** [91 cases, 12 deaths].
See Belleben, 2; Belleben and Alsleben, 4; Leimbach, 3; and Strenz-Naundorf, 82 (12).
- Mittenwalde, R.-B. Potsdam, November** 12 cases, 0 death.
Kanzow, 1887, pp. 61, 62: It is not stated whether or not the hog was inspected.
All meat from one shop.
- Niederzehren, Kr. Marienwerder, R.-B. Marienwerder**
10 cases, 1 death.
Eulenberg, 1885, p. 310: Hog not inspected.
- Nikolaivorstadt bei Breslau, R.-B. Breslau** 3 cases, 0 death.
Wolff, E., 1887, p. 56: "Imported [from where?] meat" gave rise to a small epidemic. As American meat was excluded, this outbreak was evidently due to meat "imported" from some other source.
- Oppeln (R.-B.)** [3 cases, 0 death].
See Gleichwitz.
- Ortelsburg, Kr. Ortelsburg, R.-B. Königsberg** 2 cases, 0 death.
Nath, 1887, pp. 50, 51: Two children were visiting at Burdungen and brought home some of the infected sausage. The mother and sister ate of it and were taken sick with trichinosis.
- Posen (R.-B.)** [10 cases, 0 death].
See Kobylepole.
- Potsdam (R.-B.)** [59 cases, 1 death].
See Ahrensfelde, 6; Havelberg, 20; Luckenwalde, 5; Mittenwalde, 12; Potsdam, 1; Steglitz, 10 (1); Werneuchen, 5.
- Potsdam, R.-B. Potsdam, January** 1 case, 0 death.
Pistor, 1887, p. 241: K. bei Potsdam.—Eulenberg, 1885, p. 310: December 25, 1883.
- Schmalkalden, R.-B. Cassel** 40 cases, 0 death.
Rockwitz, 1888, p. 235: Meat had passed through the municipal slaughter house, which provides inspectors. Rockwitz remarks that the guilty inspector could not be found, which is equivalent in this instance to admitting that *the hog was inspected and passed as free from trichinæ*.
- Sensburg (Kr.); R.-B. Gumbinnen** 12 cases, 0 death.
Passauer, 1887, p. 142: Details not given.
- Sorau (Kr.), R.-B. Frankfurt a. O** 1 case, 0 death.
Eulenberg, 1885, p. 309: Hog not inspected; in Berge.
- Steglitz, R.-B. Potsdam** more than 10 cases, 1 death.
Kanzow, 1887, p. 61: Early in the year. Probably caused by partially cooked sausage.
- Strenz-Naundorf, Mansfelder Gebirgskr., R.-B. Merseburg,**
May 82 cases, 12 deaths.
Eulenberg, 1885, p. 309: *A hog was inspected and passed as free from trichinæ*. Strenz-Naundorf 82 cases, 12 fatal; Belleben and Alsleben 4 cases q. v.—Wolff, 1887, p. 89: Inspector imprisoned a year and a half.—Veröff., 1888, p. 229: 83 cases, 12 deaths. These and 4 in neighboring villages due to hog slaughtered May 2, 1884; inspected and passed as free from trichinæ.

Werneuchen, Kr. Niederbarnin, R.-B. Potsdam... 5 cases, 0 death.

Kanzow, 1887, p. 62: Hog slaughtered for home use and not inspected. A later examination showed it to be trichinous.

Wirzitz (Kr.), R.-B. Bromberg 8 cases, 0 death.

Strahler, 1887, p. 56: *The hog was inspected and passed as free from trichinae.*

Wolmirsleben, Kr. Wanzleben, R.-B. Magdeburg-- 7 cases, 0 death.

Voigt, 1887, p. 94.

1885: 365 cases, 17 deaths.

Summary for the year.—In a total of 365 cases, 17 deaths, at least 42 cases, 4 deaths, *were due to meat which had been inspected and passed as free from trichinae*; at least 28 other cases may have been due to meat which was passed as free from trichinae; 5 cases (Stettin) were probably due to condemned meat; 90 cases (Wongrowitz) may have been due to dishonesty on the part of the butchers.

No official or other sanitary reports are accessible to me for the Regierungs-Bezirk Hildesheim.

No cases of trichinosis for 1885 have been found in the official sanitary reports or in other sources for the following Regierungs-Bezirke: Aachen (Trost, 1887, pp. 49, 56), Aurich (Rapmund, 1887, p. 142), Cassel (Rockwitz, 1888, p. 235), Coblenz (Massenbach, 1887, p. 61), Cologne (Schwartz, 1887), Danzig (Zeuschner, 1887), Erfurt (Richter, 1888, p. 114), Gumbinnen (Passauer, 1887, p. 142), Hannover (Becker, 1887), Liegnitz (Philipp, 1886), Lüneburg (Alten, 1887, p. 64), Minden (Schultz-Hencke, 1887, p. 73), Münster (Hölker, 1887, p. 51), Osnabrück (Bitter, 1888), Posen (Gammel, 1887, pp. 14, 18), Potsdam (Kanzow, 1887, p. 76), Schleswig-Holstein (Bockendahl, 1887, p. 153), Sigmaringen (Koch, 1887), Stade (Bohde, 1887, p. 126), Stralsund (Koehler, 1887, p. 85), Trier (Schwartz, 1887), Wiesbaden (Wagner [1886?]).

Albrechtsdorf, Kr. Pr. Eylau, R.-B. Königsberg, February...

4 cases, 0 death.

Nath, 1887, pp. 51, 52: Smoked sausage. No further details.

Arnsberg (R.-B.) [5 cases, 0 death].

See Dortmund, 5.

Baudach, Kr. Crossen, R.-B. Frankfurt 8 cases, 8 deaths.

Wiebecke, 1888, p. 36: Two families. Meat had not been inspected.

Bergel, Kr. Ohlau, R.-B. Breslau 3 cases, 0 death.

Wolff, E., 1887, pp. 56, 57: As the remains of the meat could not be found it could not be proven against the inspector that he had passed the hog as free from trichinae. The diagnosis evidently rested upon symptoms. "Several" cases. Ate the meat three months after the animal was slaughtered.

Berlin [15 cases, 1 death].

Berlin, February 12 cases, 1 death.

Lesserhafft, 1885, p. 108.—Eulenberg, 1886, p. 387: About 10 cases, 1 death.—St. P. med. Wochenschr., 1886, p. 188.—Pistor, 1887, pp. 241, 242: Dentist's family. Meat came from outside the city. *The hog was inspected in Reinickendorf and passed as free from trichinae.* A friend of the family (Musikdirector F.) was treated in Bethanien Hospital.—Zeitschr. f. Fleischbeschau u. Fleischprod., 1887, II (8), p. 99.

- Berlin, February 1-7**----- [1 case, 0 death].
Veröff., 1885, IX (7), p. 27: In hospital; patient between 31 and 60 years old.
Possibly this case is included in the foregoing reference.
- Berlin**----- [1 case, 0 death].
Veröff., 1885, IX, II (2), p. 13: No details.
- Berlin**----- 3 cases, 0 death.
Veröff., 1886, p. 135: Four cases, 0 death, in Berlin hospital from January 4, 1885, to January 2, 1886. One patient, between 16 and 30 years old; 3 between 31 and 60 years old. One of these probably refers to the February outbreak. See above.
- Breslau (R.-B.)**----- [23 cases, 4 deaths].
See Bergel, 3; Gaisbach, 4 (1); Gloschkau, 10; Schäbitz, 6 (3).
- Bromberg (R.-B.)**----- [90 cases, 0 death].
See Wongrowitz.
- Coeslin (R.-B.)**----- [3 cases, 0 death].
See Colberg, 3.
- Colberg, R.-B. Coeslin, September**----- 3 cases, 0 death.
Wernich, 1887, p. 163: Ate sausage before meat was inspected.
- Dietrichsdorf, Kr. Gerdauen, R.-B. Königsberg, February**--
6 cases, 0 death.
Nath, 1887, pp. 51, 52: Meat (sausage) had not been inspected.
- Delitzsch, Mansfelder. See Kreis and Eisleben, R.-B. Merseburg**--
[15 cases, 0 death].
Eulenberg, 1886, p. 387.—See other outbreaks—Kleipzig, etc.
- Deutsch-Nettkow, Kr. Crossen, R.-B. Frankfurt**. 10 cases, 0 death.
Wiebecke, 1888, p. 36: Source of meat not learned.
- Dortmund, R.-B. Arnsberg, February**----- 5 cases, 0 death.
Katerbau, 1888, p. 121: *The hog was inspected and passed as free from trichinæ.* Afterwards trichinæ were found in the twentieth preparation. Three cases so light as to be uncertain. Hog slaughtered in December.
- Drossen (Kr.), R.-B. Frankfurt**----- 3 cases, 0 death.
Eulenberg, 1886, p. 387: *The hog was probably inspected and passed as free from trichinæ.* "Wahrscheinlich durch mangelhafte Untersuchung."—Zeitschr. f. Fleischschau u. Fleischprod., 1887, II (8), p. 99.
- Düsseldorf (R.-B.)**----- [3 cases, 0 death].
See Elberfeld.
- Elberfeld, R.-B. Düsseldorf**----- 3 cases, 0 death.
Weiss, 1888, p. 95: Light cases.—Weiss, 1890, p. 152: No details.
- Eisleben, R.-B. Merseburg, October**----- 20 cases, 0 death.
Wolff, 1887, p. 90: Meat was not definitely traced, but it was suspected that it came from a certain butcher in the Wiesenmarkt.—Veröff., 1888, p. 229.
- Frankfurt a. O. (R.-B.)**----- [82 cases, 11 deaths].
See Baudach, 8 (8); Deutsch-Nettkow, 10; Drossen (Kr.), 3; Königsberg (Kr.), 1 (1); Ost-Sternberg (Kr.), 15; Sorau 40, 3; and Vorbruch, 2 (2).
- Gaisbach, Kr. Guhrau, R.-B. Breslau**----- 4 cases, 1 death.
Wolff, E., 1887, p. 57: Hog was not inspected.

- Gerdauden, Kr. Gerdauden, R.-B. Königsberg, October** 5 cases, 0 death.
 Nath, 1887, pp. 51, 52: The meat seller was fined 15 marks for not having the meat inspected.
- Gleichwitz (Kr.), R.-B. Oppeln** 3½ cases, 0 death.
 Noack, 1887, p. 102: Details not given. Two outbreaks (1884-1885). Number of cases not mentioned.
- Gloschkau, R.-B. Breslau, December** 10 cases, 0 death.
 Wolff, E., 1887, p. 56: *The hog was inspected and passed as free from trichinæ.* An "entire family" and several other persons ate of the meat and were taken sick (exact number not stated). Hog had been cut up before inspector took samples. Later examination showed that the meat was heavily infected. The inspector was imprisoned one year.
- Graudenz, R.-B. Marienwerder** 12 cases, 0 death.
 Veröff., 1886, p. 135: Between December 27, 1884, and December 26, 1885. Details not given.
- Heilighenthal, Mansfelder. See Kr., R.-B. Merseburg, February** 3 cases, 0 death.
 Wolff, 1887, pp. 89, 90: *The hogs were inspected and passed as free from trichinæ.* On account of these cases the meat was again examined by another inspector and by the Kreisphysikus, but no parasites were found; finally the Kreiswundarzt found one trichina.
- Hettstedt, R.-B. Merseburg, October** 3 cases, 0 death.
 Wolff, 1887, p. 90: Source apparently determined. "Several" cases in persons who had visited the Wiesenmarkt.—Eulenberg, 1886, p. 387.
- Klepzig, Kr. Delitsch, R.-B. Merseburg, January** .. 3 cases, 0 death.
 Wolff, 1887, p. 89: *The hog was inspected and passed as free from trichinæ.* In later examination of the rest of the pork no trichinæ could be found.
- Königsberg (R.-B.)** [37 cases, 1 death].
 See Albrechtsdorf, 4; Dietrichsdorf, 6; Gerdauden, 5; Labiau, 2; Rettau, 7 (1); Rosenberg, 1; Sand, 3; and Schönfliess, 9.
- Königsberg (Kr.), R.-B. Frankfurt a. O.** 1 case, 1 death.
 Eulenberg, 1886, p. 387.—Zeitschr. f. Fleischbeschau u. Fleischprod., 1887, II (8), p. 99.
- Konitz, R.-B. Marienwerder** 2 cases, 0 death.
 Veröff., 1886, p. 135: Details not given. Between December 27, 1884, and December 26, 1885.
- Labiau (Kr.), R.-B. Königsberg** 2 cases, 0 death.
 Nath, 1887, p. 52: Two persons who were visiting in the neighboring Kreis and contracted the disease.
- Magdeburg (R.-B.)** [25 cases, 0 death].
 See Wanzleben.
- Marienwerder (R.-B.)** [32 cases, 0 death].
 Reiche, 1887, pp. 34, 35: I fail to find any cases recorded in this report. See, however, Graudenz, 12; Konitz, 2; Marienwerder, 10; Strassburg, 1; Stuhm, 5; and Thorn, 2.—Veröff., 1886, p. 135: 32 cases between December 27, 1884, and December 26, 1885.

- Marienwerder (Kr.), R.-B. Marienwerder** 10 cases, 0 death.
Veröff., 1886, p. 135: Details not given. Between December 27, 1884, and December 26, 1885.
- Merseburg (R.-B.)** [29 cases, 0 death].
Veröff., 1888, p. 229.—Review of Wolff.—See Delitzsch, [15]; Eisleben, 20; Heiligenthal, 3; Hettstedt, 3; and Klepzig, 3.
- Oppeln (R.-B.)** [16 cases, 0 death].
See Gleichwitz, 3; and Zabrze, 13.
- Ost-Sternberg (Kr.), R.-B. Frankfurt** 15 cases, 0 death.
Eulenberg, 1886, p. 387.—Zeitschr. f. Fleischbeschau u. Fleischprod., 1887, II (8), p. 99.
- Rettau, Kr. Friedland, R.-B. Königsberg, February**
7 cases, 1 death.
Nath, 1887, pp. 51, 52.
- Rosenberg, Kr. Gerdauen, R.-B. Königsberg, Fall** ... 1 case, 0 death.
Nath, 1887, pp. 51, 52.
- Sand, Kr. Pr. Eylau, R.-B. Königsberg, February** ... 3 cases, 0 death.
Nath, 1887, pp. 51, 52: Smoked sausage.
- Schäbitz, R.-B. Breslau, November–December** 6 cases, 3 deaths.
Wolff, E., 1887, p. 56: *The hog was inspected and passed as free from trichinæ.* Family taken sick; 3 members died; the rest recovered. Subsequent examination of the meat showed that it was heavily infested. Inspector imprisoned two years.
- Schönfliess, Kr. Allerstein, R.-B. Königsberg, May** ... 9 cases, 0 death.
Nath, 1887, pp. 51, 52: Including two visitors from Gut Ramssau.
- Sorau (Kr.), R.-B. Frankfurt** 40 cases, 0 death.
Eulenberg, 1886, p. 387: Stadt Forst. Meat not inspected.—Zeitschr. f. Fleischbeschau u. Fleischprod., 1887, II (8), p. 99.
- Sorau (Kr.), R.-B. Frankfurt. Second outbreak** ... 3 cases, 0 death.
Eulenberg, 1886, p. 387: "Several" cases.
- Stettin (R.-B.)** [5 cases, 0 death.]
See Stettin (Stadt).
- Stettin, R.-B. Stettin** 5 cases, 0 death.
Eulenberg, 1886, p. 387.—Dieterich, 1887, p. 137: *Infection probably came from meat which had been inspected, found to be trichinous, and condemned.* A portion was then used by the butcher.
- Strassburg, R.-B. Marienwerder** 1 case, 0 death.
Veröff., 1886, p. 135: Details not given. December 27, 1884–December 26, 1885.
- Stuhm, R.-B. Marienwerder** 5 cases, 0 death.
Veröff., 1886, p. 135: Details not given. December 27, 1884–December 26, 1885.
- Thorn, R.-B. Marienwerder** 2 cases, 0 death.
Veröff., 1886, p. 135: Details not given. December 27, 1884–December 26, 1885.
- Vorbruch, Kr. Friedeberg, R.-B. Frankfurt** 2 cases, 2 deaths.
Wiebecke, 1888, p. 36: It is not stated whether or not the meat was inspected. Hog home slaughtered.
- Wanzleben (Stadt and Domaine), R.-B. Magdeburg, May**
25 cases, 0 death.
Voigt, 1887, p. 94: Identity of meat with records in inspector's book could not be established, as meat was all gone.

Wongrowitz, R.-B. Bromberg 90 cases, 0 death.

Strahler, 1887, p. 56: Two butchers concerned. It was proved that they had smuggled a number of hogs away from the inspection, but it is not stated that this particular outbreak was definitely traced, except to meat bought of these two men.

Zabrze (Kr.), R.-B. Oppeln 13 cases, 0 death.

Noack, 1887, p. 102: From eating so-called "Polish sausage." Details not given.

1886: 136 cases, 10 deaths.

Summary for the year.—In a total of 136 cases, 10 deaths, 37 cases, 3 deaths, are stated to be *due to pork which was inspected and passed as free from trichinæ*; at least 5 other cases may have been due to inspected meat, but they were not definitely proven; 5 cases were due to eating pork before the result of the examination was known.

No cases of trichinosis in man for 1886 have been found in the official health reports or in other sources for the following Regierungs-Bezirke: Aachen (Troost, 1891, p. 106), Arnsberg (Tenholt, 1891, p. 86), Aurich (Rapmund, 1890, p. 88), Berlin (Pistor, 1890), Coblenz (Massenbach, 1890, p. 68), Cologne (Schwartz, 1889, p. 32), Coeslin (Wernich, 1890, p. 99), Erfurt (Pippow, 1892, p. 114), Frankfurt a. O. (Frankfurt, 1890, p. 39), Gumbinnen (Passauer, 1890, p. 106), Hannover (Becker, 1891, p. 94), Hildesheim (Grun, 1890, p. 45), Liegnitz (Philipp, 1890, p. 97), Lüneburg (Alten, 1890), Magdeburg (Voigt, 1891, p. 30), Minden (Rapmund, 1892, p. 106), Münster (Kölker, 1890, p. 80), Oppeln (Schmidtman, 1893, p. 56), Osnabrück (Bitter, 1891), Sigmaringen (Lauchert, 1890, p. 52), Stade (Bohde, 1890), Stettin (Katerbau), Stralsund (Haselberg, 1890, p. 68), Trier (Schwartz, 1890), Wiesbaden (Wagner [18—], p. 76).

Baranow, Kr. Kempen, R.-B. Posen 4 cases, 0 death.

Dieterich, 1891, p. 139: The meat came from Pitschen, Schlesien.

Breslau (R.-B.) [20 cases, 1 death].

See Breslau, 3, 10; Saarau, 7 (1).

Breslau (Stadt), R.-B. Breslau, March 3 cases, 0 death.

Wolff, E., 1890, pp. 38, 39: Ham came from Pfaffendorf near Reichenbach.

Breslau (Stadt), R.-B. Breslau 10 cases, 0 death.

Veröff., 1887, p. 603: See Norddeutsche Allg. Zeitung, No. 453, September 29, 1886.

Bromberg (R.-B.) [1 case, 0 death].

See Wongrowitz.

Cassel (R.-B.) [12 cases, 2 deaths].

See Lichtenau, 4; and Rodenberg, 8 (2).

Cavern, Kr. Pr. Eylau, R.-B. Königsberg 6 cases, 0 death.

Nath, 1891, p. 54: Sausage insufficiently cooked. Meat had not been inspected.

Danzig (R.-B.) [2 cases, 2 deaths].

See Marienwerder.

Dietrichsdorf, Kr. Gerdauen, R.-B. Königsberg 7 cases, 0 death.

Nath, 1891, p. 54: *The hog was inspected and passed as free from trichinæ.*

Düsseldorf (R.-B.) [5 cases, 0 death].

See Heiligenhaus.

Gradken (Gut), Kr. Allenstein, R.-B. Königsberg, February --

14 cases, 3 deaths.

Nath, 1891, pp. 53, 54: "Erst nachträglich wurden die Trichinen in den Resten der Fleischwaaren entdeckt," but Nath does not definitely state whether or not the hog had been inspected.

Halle a. S., R.-B. Merseburg, August----- 10 cases, 0 death.

Zeitschr. f. Fleischbeschau u. Fleischprod., 1886, II (1), Oct., p. 8: 10 severe cases, and many light cases.—Wolff, 1890, p. 85: The butcher always had his meat inspected by a competent inspector: "von einem fahrlässigen Verfahren bei der Untersuchung konnte nach dem milden Verlaufe der Erkrankungen auch in diesem Falle nicht die Rede sein," from which, in connection with the rest of the description, it may be concluded that *the hog was inspected and passed as free from trichinae*.—Veröff., 1891, p. 245: Case not explained.—Ostertag, 1895, p. 416, and 1899, p. 505: Gives date as 1885. "Verschuldung unaufgeklärt."

Heiligenhaus, Kr. Mettmann, R.-B. Düsseldorf, February ----

5? cases, 0 death.

Weiss, 1890, pp. 70, 152: Hog had probably not been inspected. In one place this is given as 3 cases; in another, 5 cases.

Hettstedt, R.-B. Merseburg----- 5 cases, 0 death.

Wolff, 1890, p. 85: *The hog was inspected by a very competent inspector and passed as free from trichinae*. In the later examination of 150 preparations by the Kreisphysikus, 2 veterinarians, and 9 trichina inspectors, an average of 1 trichina was found in each preparation. "Several" persons were taken sick.

Kathrinenhof, Kr. Pr. Eylau, R.-B. Königsberg--- 2 cases, 0 death.

Nath, 1891, p. 54: "Auch hier fand erst nachträglich die mikroskopische Feststellung statt," but we are not told definitely whether the hog was first inspected and passed as free from trichinae.

Königsberg (R.-B.) ----- [32 cases, 3 deaths].

See Cavern, 6; Dietrichsdorf, 7; Gradken, 14 (3); Kathrinenhof, 2; and Peissnick, 3.

Lichtenau, Kr. Witzhausen, R.-B. Cassel----- 4 cases, 0 death.

Rockwitz, 1891, p. 62: *The hog was inspected and passed as free from trichinae*. "Die Infection war auf den Genuss des Fleisches von Schweinen zurückzuführen, die untersucht und für trichinenfrei erklärt worden waren."

Löbau, R.-B. Marienwerder, July ----- 3 cases, 0 death.

Michelsen, 1890, p. 76: Infection was supposed to be from Wiener Würstchen eaten raw in Dt. Eylau. No cases were recorded in Eylau, and the microscopic inspection of the wares in the butcher's shop from which the sausage came was negative.

Marienwerder (Kr.), R.-B. Danzig ----- 2? cases, 2 deaths.

Zeuschner, 1891, p. 48: From sausage. Cooked meat from same hog produced no ill effects.

Marienwerder (R.-B.) ----- [20 cases, 1 death].

See Löbau, 3; Marienwerder, 4, 4, 6; and Neumark, 3 (1).

Marienwerder (R.-B.) ----- 4 cases, 0 death.

Veröff., 1886, Feb. 9, p. 78: Details not given.

Marienwerder (R.-B.) ----- 4 cases, 0 death.

Veröff., 1886, March 16, p. 145: Details not given.

- Marienwerder (R.-B.)** 6 cases, 0 death.
Veröff., 1886, June 1, p. 323: Details not given.
- Merseburg (R.-B.)** [15 cases, 0 death].
See Halle, 10; and Hettstedt, 5.—Wolff, 1890, p. 85: 15 cases.
- Neumark, R.-B. Marienwerder, March** 3 cases, 1 death.
Michelsen, 1890, p. 76: *The hog was inspected and passed as free from trichinae.*
“Dem Fleischbeschauer, welchem eine schwere Vernachlässigung seiner Amtspflicht nachgewiesen wurde, ist die Concession entzogen worden.”
- Niederlehme, Kr. Beeskow-Storkow, R.-B. Potsdam**
2 cases, 0 death.
Kanzow, 1890, p. 63: Source of infection not known. Early in year. A house butcher and his wife.
- Peissnick, Kr. Gerdauen, R.-B. Königsberg** 3 cases, 0 death.
Nath, 1891, p. 54.
- Posen (R.-B.)** [4 cases, 0 death].
See Baranow.
- Potsdam (R.-B.)** [5 cases, 0 death].
See Niederlehme, 2; and Velten, 3.
- Ratzeburg, Lauenburg, Schleswig-Holstein, December**
4 cases, 0 death.
Bockendahl, 1889, p. 105: Meat used before inspector reported.
- Rodenberg, Kr. Rinteln, R.-B. Cassel** 8 cases, 2 deaths.
Rockwitz, 1891, p. 62: *The hog was inspected and passed as free from trichinae.*
“Die Infection war auf den Genuss des Fleisches von Schweinen zurückzuführen, die untersucht und für trichinenfrei erklärt worden waren [p. 100]. Der Kreisphysikus in Rinteln nimmt an, dass der Trichinenbeschauer in Rodenberg, ein sehr befähigter und mit einem guten Mikroskope versehener Sachverständiger, die ihm übersandten Fleischproben gar nicht untersucht habe; allerdings waren die Trichinen in dem Fleische sehr ungleich vertheilt, so dass einzelne Präparate gar keine andere dagegen sehr zahlreiche Trichinen enthielten.”
- Saarau, Kr. Schweidnitz, R.-B. Breslau** 7 cases, 1 death.
Wolff, E., 1890, p. 39: Hog had not been inspected.
- Schleswig-Holstein (R.-B.)** [20 cases, 1 death].
See Ratzeburg, 4; Wansbeck, 16 (1).
- Velten, R.-B. Potsdam** 3 cases, 0 death.
Kanzow, 1890, p. 63: Hog was slaughtered for home use. It is not stated whether or not it was inspected, but later examination showed it to contain trichinae.
- Wansbeck, R.-B. Schleswig-Holstein, March** 16 cases, 1 death.
Bockendahl, 1889, p. 105: 12 cases, 1 death, in Hamburg hospital; hog slaughtered February 12, from Hamburg market, and was not inspected. Butcher fined costs and given one month's imprisonment.—Veröff., 1891, p. 245; March 7-13: 12 cases in Wansbeck; afterwards 2 cases in “Hamburg-Gebiet,” and 2 light cases in Wansbeck.—Ostertag, 1895, p. 416: Gives the date as 1885, March 7-13.
- Wongrowitz (Kr.), R.-B. Bromberg** 1 case, 0 death.
Peters, 1890, p. 59: Butcher boy ate raw pork before the hog was inspected. Peters argues that the boy did not consult medical aid immediately, by which the outbreak in this case might have been prevented.

1887: 294 cases, 15 deaths.

Summary for the year.—A total of 294 cases, 15 deaths. Of these, 142 cases, 4 deaths, are recorded as *due to pork which was inspected and passed as free from trichinæ*. Besides these, 87 cases, 1 death, were probably due to meat which was inspected and passed as free from trichinæ. Forty-two of these 87 cases were due either to inspected pork or to meat which the butcher smuggled through the inspection. There are no good grounds for believing that the other 45 cases were not due to inspected pork. The Wildemann outbreak of 103 cases is especially interesting. The inspector was acquitted on the ground that even with very careful inspection the parasites may be overlooked.

No cases of trichinosis in man have been found in the official or other health reports for 1887 for the following Regierungs-Bezirke: Aachen (Trost, 1891, p. 106), Arnsherg (Tenholt, 1891, p. 86), Aurich (Rapmund, 1890, p. 88), Cassel (Rockwitz, 1891, p. 62), Coblenz (Massenbach, 1890, p. 68), Cologne (Schwartz, 1889, p. 32), Düsseldorf (Weiss, 1890, pp. 50, 152), Frankfurt (Frankfurt, 1890, p. 39), Gumbinnen (Passauer, 1890, p. 106), Hannover (Becker, 1891, p. 94), Liegnitz (Philipp, 1890, p. 97), Lüneburg (Alten, 1890), Magdeburg (Voigt, 1891, p. 30), Merseburg (Wolff, 1890, p. 85), Minden (Rapmund, 1892, p. 106), Münster (Kölker, 1890, p. 80), Osnabrück (Bitter, 1891), Schleswig-Holstein (Bockendahl, 1889, p. 105), Sigmaringen (Lauchert, 1890, p. 52), Stade (Bohde, 1890), Stettin (Katerbau, 1890, p. 109), Trier (Schwartz, 1890), Wiesbaden (Wagner [18—], p. 76).

Barth, Kr. Franzenburg, R.-B. Stralsund..... 1 case, 0 death.

Haselberg, 1890, p. 68: No details given, except that the case was not investigated. It is not stated in which year (1886, 1887, or 1888) it occurred, but it is stated that probably isolated cases occur now and then.

Berlin..... [7 cases, 1 death].

See next two entries; also Neu-Kulm-See.

Berlin..... 2 cases, 0 death.

Veröff., 1889, p. 157: In hospitals; 2 cases; patients between 16 and 30 years old.

Berlin, December..... 5 cases, 1 death.

Veröff., 1891, p. 245: The meat was not inspected.—Ostertag, 1895, p. 417: Patient died in 1888.—Pistor, 1890, p. 169: 5 cases, 1 death. Meat not inspected, came from Neu-Kulm-See, Kr. Thorn.—Michelsen, 1890, p. 77: 2 deaths.—Ostertag, 1899, p. 497: 5 cases, 1 death.

Bieberswalde, Kr. Wehlau, R.-B. Königsberg.... 10 cases, 0 death.

Nath, 1891, p. 54: Insufficiently cooked sausage. The hog had not been inspected.—Veröff., 1891, p. 245, and Ostertag, 1895, p. 417: Refer to an outbreak of 10 cases. Probably this is the Bieberswalde epidemic. Ostertag gives the date as February.

Bortschenshine bei Trachenberg, R.-B. Breslau, April.....

14 cases, 1 death.

Wolff, E., 1890, p. 39: *The hog was inspected and passed as free from trichinæ: "welche durch Fahrlässigkeit eines Fleischbeschauers verschuldet war."* Several cases in Breslau also from same source.

Breslau (R.-B.)..... [19 cases, 1 death].

See Bortschenshine, 14 (1); Breslau. 3: and Trebnitz, 2.

- Breslau, R.-B. Breslau, April**..... 3 cases, 0 deaths.
 Wolff, E., 1890, p. 39: Several cases. Same source of infection as the outbreak in Bortschenshine. *The hog was inspected and passed as free from trichina.*
- Breslau and Jauer, Prussia**..... [? cases, ? deaths].
 Zeitschr. f. Fleischbeschau u. Fleischprod., 1888, III (5), p. 50: In speaking of the Braunschweig-Holzminiden outbreak, "und auch in Breslau und Jauer Erkrankungen an Trichinose vorgekommen, welche auf den Genuss von Fleischwaaren bezogen wurden."
- Bromberg (R.-B.)**..... [45 cases, 1 death].
 See Inowrazlaw.
- Coeslin (R.-B.)**..... [42 cases, 0 death].
 See Dramburg, 21; and Falkenburg, 21.
- Danzig (R.-B.)**..... [10 cases, 0 death].
 See Schönwarling.
- Dramburg, R.-B. Coeslin**..... 21 cases, 0 death.
 Wernich, 1890, p. 99: It could not be proved whether the hog had been inspected and passed as free from trichinae, or whether the butcher had smuggled the meat through the inspection. "Weil mit Bestimmtheit sich nicht feststellen liess ober das Schwein der Fleischbeschau entzogen¹ oder ob der Fleischbeschauer die Fleischschau oberflächlich ausgeführt hatte." A few weeks later trichina inspector St. passed a hog as free from trichinae which another inspector found to be trichinous.
- Erfurt (R.-B.)**..... [12 cases, 0 death].
 See Mühlhausen.
- Falkenburg, R.-B. Coeslin**..... 21 cases, 0 death.
 Wernich, 1890, p. 99: About same number as in Dramburg; apparently from the same origin. It could not be proven whether the hog had been inspected or whether it had been smuggled¹ through the inspection.
- Gerdauen (Kr.), R.-B. Königsberg, March**..... 2 cases, 0 death.
 Veröff., 1891, p. 245: Meat had not been inspected.
- Gilgenau, Kr. Ortelsburg, R.-B. Königsberg**..... 4 cases, 1 death.
 Nath, 1891, p. 54: The hog was not examined until part of it was eaten. It was afterwards found to be heavily infested.—Veröff., 1891, p. 245, and Ostertag, 1895, p. 416, and 1899, p. 505, cite 4 cases, 1 fatal, in Ortelsburg for May. Probably the reference belongs here.
- Grund.**
 See Wildemann.
- Hildesheim (R.-B.)**..... [103 cases, 3 deaths].
 See Wildemann.
- Inowrazlaw, R.-B. Bromberg, September–October** 45 cases, 1 death.
 Veröff., 1887, p. 665: About 50 cases, 1 death. See Allg. Med.-Centr. Zeitung.—Veröff., 1888, p. 343: 45 cases, 1 death. About one-third were Jews, who bought the meat for beef. "It is possible that the pork was brought in from the country and not inspected." (But the town has an obligatory inspection.)—Zeitschr. f. Fleischbeschau u. Fleischprod., 1888, III (5), Feb., p. 50.—Allg. Med. C. Z., 88 St., 2 November, p. 1582: About 50 cases, 1 death.—Peters, 1890, pp. 59, 60: 45 cases, 1 death. "Da sämtliches Schlachtvieh in Inowrazlaw nur in

¹The German words "entziehen," "entzogen," are here translated "smuggled" in view of the circumstances.

dem öffentlichen Schlachthause geschlachtet werden darf, wo es von geübten Fleischbeschauern auf Trichinen untersucht wird, so ist der Medizinal-Beamte der Ansicht, "dass dasjenige Fleisch, welches zur Infection geführt hat, von auswärts importirt und auf Trichinen gar nicht untersucht worden ist." The argument is exceedingly weak. How much better it would be for the health officer frankly to acknowledge that a trichina inspection can not be guaranteed than to adopt this line of defense. However, as he prefers the above attempted explanation, this case will be given the benefit of the doubt and excluded from the outbreaks caused by meat which is inspected and declared to be free from trichinæ.

Jüterborg (Kr.), R.-B. Potsdam..... 1 case, 0 death.

Kanzow, 1890, p. 63: Hog not inspected. Man ate raw meat. Later examination showed numerous trichinæ.

Kinderhof, Kr. Gerdauen, R.-B. Königsberg, March.....

[2 cases, 0 death].

Nath, 1891, p. 54.—Veröff., 1891, p. 245: Meat had not been inspected.—Ostertag, 1899, p. 505.

Königsberg (R.-B.)..... [36 cases, 2 deaths.]

See Bieberswalde, 10; Gerdauen, 2; Gilgenau, 4 (1); Rollnau, 8; Wolfsdorf, 12 (1).

Kreutzburg (Amtsgericht), Kr. Kreutzburg, Ober-Schlesien,

R.-B. Oppeln..... 3 cases, 0 death.

Veröff., 1891, p. 64*: *It is not excluded that the hog was inspected and passed as free from trichinæ: "Es wurde nicht für ausgeschlossen gehalten, dass das Schwein von welchem der q. Schinken herrührte, untersucht, dass aber der Fleischbeschauer nicht mit der erforderlichen Gewissenhaftigkeit verfahren habe."* * * * "Da nicht erwiesen werden konnte, dass der Angeklagte dasjenige Schwein, von welchem der verkaufte Schinken herrührte nicht hatte untersuchen lassen, oder bei dem Verkaufe des etwa auf andere Weise erworbenen Schinkens aus Fahrlässigkeit die trichinöse Beschaffenheit des letzteren nicht gekannt habe, erfolgte die Freisprechung." Urtheil, 25. April 1887, wider Fleischermeister P.

Marienwerder (R.-B.)..... [6 cases, 2 deaths].

See Neu-Kulm-See.

Minden.

See Wildemann.

Mühlhausen i. Th., R.-B. Erfurt, December..... 12 cases, 0 death.

Veröff., 1888, p. 344: Raw pork. *The hog must have been inspected and passed as free from trichinæ, since the butcher's book agreed with that of the inspector.*—Veröff., 1891, p. 245.—Pippow, 1892, pp. 114, 143, 144: On p. 114 it is stated that the outbreak was in Nordhausen and that definite proof of the diagnosis was wanting, but on pp. 143, 144 it is stated that trichinæ were found in a piece of deltoid muscle taken from one of the patients. From the statement made *it is evident that the hog was inspected and passed as free from trichinæ.* Are two different outbreaks referred to?—Ostertag, 1895, p. 417, and 1899, p. 505: Immediately preceding the citation of this outbreak Ostertag emphasizes the fact that the *other* outbreaks were *not* due to inspected pork, but he omits to state that *this one* was.

Neu-Kulm-See, R.-B. Marienwerder..... 6 cases, 2 deaths.

Michelsen, 1890, pp. 76, 77: Two hogs slaughtered and not inspected; afterwards found to be trichinous. Three persons "and several" others were taken sick. Some of the meat was sent to Berlin, and 2 persons who ate of it died. The owner of the meat was imprisoned three months.

Nordhausen.

See Mühlhausen.

Oppeln (R.-B.) [3 cases, 0 death].

See Kreutzburg.

Posen (R.-B.) [9 cases, 5 deaths].

See Ruda, 6 (3); Zembowo, 3 (2).

Potsdam (R.-B.) [1 case, 0 death].

See Jüterborg.

Rollnau, Kr. Mohrungen, R.-B. Königsberg 8 cases, 0 death.

Nath, 1891, p. 54.—Veröff., 1891, p. 245, and Ostertag, 1895, p. 416, cite 8 cases for Mohrungen in March, 1887, which probably belong here. Meat had not been inspected.

Ruda, Kr. Krotoschin, R.-B. Posen 6 cases, 3 deaths.

Dieterich, 1891, p. 139: The meat came from Kreis Kröben.

Schönwarling, R.-B. Danzig 10 cases, 0 death.Zeuschner, 1891, p. 49: *The hog had been inspected by "Dr. A.," and had been passed as free from trichinæ. Later examination showed trichinæ. Exact number of cases not given. "Familie des Hofbesitzers G., nebst dem Hausgesinde und einigen im Hause verkehrenden Handwerkern und Arbeitern."***Stralsund (R.-B.)** [1 case, 0 death].

See Barth.

Trebnitz (Kr.), R.-B. Breslau, August 2 cases, 0 death.

Wolff, E., 1890, p. 39: The meat was eaten raw before the hog was inspected. Inspector found trichinæ.

Wildemann and vicinity, Kr. Zellerfeld, R.-B. Hildesheim, October–November 103 cases, 3 deaths.Veröff., 1887, p. 665: 86 cases.—Zeitschr. f. Fleischbeschau u. Fleischprod., 1887, III (3), Dec., p. 34: "Nach den letzten Meldungen ist die Krankheit durch Versendung von Würsten nach Grund und Zellerfeld verschleppt worden. Eltern, die ihren beim Militär stehenden Söhnen Würste geschickt hatten, haben dadurch das Auftreten der Trichinosis in Minden und Vegesack veranlasst." Idem, 1888, III (8), p. 51.—Veröff., 1888, p. 344: 103 cases, 3 deaths, distributed as follows: Wildemann, 93; Grund, 4; Lautenthal, 3; Zellerfeld, 3. *The hog was inspected and passed as free from trichinæ.*—Grun, 1890, p. 45: *The hog was inspected and passed as free from trichinæ. The inspector was acquitted on the ground that even with very careful inspection the trichinæ may escape detection. "Da die zugezogenen Sachverständigen erklärten, dass selbst bei sorgfältiger Untersuchung die Durchsetzung eines Schweines mit Trichinen möglich sei, ohne zur Beobachtung zu gelangen."*—Veröff., 1891, p. 296.—[Nord. Allg. Zeit., No. 513, vom 3. November.]**Wolfsdorf, Kr. Heilsberg, R.-B. Königsberg** 12 cases, 1 death.

Nath, 1891, p. 54: The hog had not been inspected.—Veröff., 1891, p. 245, and Ostertag, 1895, p. 416, cite 12 cases, 1 death, for Heilsberg in January and February, 1887, which are probably the same.

Zembowo, Kr. Buk, R.-B. Posen 3 cases, 2 deaths.

Dieterich, 1891, p. 139.

1888: 134 cases, 14 deaths.**Summary for the year.**—In a total of 134 cases, 14 deaths, at least 20 cases appear to have been *due to meat which was inspected and*

passed as free from trichinæ; 2 cases, 1 death, were due to meat from a condemned hog; 4 cases were due to sausage made before meat was inspected.

No cases of trichinosis in man were found in the official or other sanitary reports for the following Regierungs-Bezirke: Aachen (Trost, 1891), Arnsberg (Tenholt, 1891, p. 86), Aurich (Rapmund, 1890, p. 88), Coblenz (Massenbach, 1890, p. 68), Coeslin (Wernich, 1890, p. 99), Cologne (Schwartz, 1889, p. 32), Danzig (Zeuschner, 1891, p. 50), Düsseldorf (Weiss, 1890, p. 152), Erfurt (Pippow, 1892, p. 114), Frankfurt (Frankfurt, 1890, p. 39), Hannover (Becker, 1891, p. 94), Liegnitz (Philipp, 1890, p. 97), Lüneburg (Alten, 1890), Magdeburg (Voigt, 1891, p. 30), Minden (Rapmund, 1892, p. 106), Münster (Kölker, 1890, p. 80), Oppeln (Schmidtman, 1893, p. 56), Osnabrück (Bitter, 1891), Posen (Dieterich, 1891, p. 139), Sigmaringen (Lauchert, 1890, p. 52), Stade (Bohde, 1890), Stettin (Katerbau, 1890, p. 109), Stralsund (Haselberg, 1890, p. 68), Trier (Schwartz, 1890), Wiesbaden (Wagner [18—], p. 76).

Berlin [5 cases, 3 deaths].

See separate cases.

Berlin 1 case, 0 death.

Veröff., 1888, p. 1: Charité.

Berlin 1 case, 1 death.

Veröff., 1888, p. 69: 1 death mentioned.

Berlin 2 cases, 1 death.

Veröff., 1888, p. 157: In hospital; 1 patient between 16 and 30 years old; 1 between 31 and 60 years old.

Berlin 1 case, 1 death.

Veröff., 1888, p. 241: Moabit hospital; 1 death mentioned.

Breslau (R.-B.) [4 cases, 0 death].

Wolff, 1890, p. 39: Says no cases were reported for 1888. See, however, Oels.

Bromberg (R.-B.) [36 cases, 2 deaths].

See Bromberg, 3; Gnesen, 2 (1); Inowrazlaw, 25; Swiniary, 6 (1).

Bromberg, R.-B. Bromberg, July 3 cases, 0 death.

Peters, 1890, p. 60: "Einige Personen;" exact number not given. Source of infection remained undetermined. Diagnosis based on symptoms.

Cassel (R.-B.) [3 cases, 0 death].

See Soldorf.

Fischhausen, Memel, and Mohrunen, R.-B. Königsberg ..

[11 cases, 2 deaths].

Veröff., 1888, p. 119: See Mohrunen, Rogehen, and Schmelz.

Gnesen (Landgericht), R.-B. Bromberg 2 cases, 1 death.

Veröff., 1891, p. 63*: *Hog had been condemned, but a portion appears to have been eaten.*

Gumbinnen (R.-B.) [14 cases, 1 death].

See Krupinnen.

Hildesheim (R.-B.) [2 cases, 1 death].

See Obergrasmühle.

Inowrazlaw, R.-B. Bromberg, September..... 25? cases, 0 death.

Peters, 1890, p. 60: Exact number of cases not given. Diagnosis based on symptoms. Source of infection not traced.—Archiv f. anim. Nahrungsmittelk., 1888, IV (3), Dec., p. 40: "Aus Inowrazlaw werden wiederum 20-30 Fälle von Trichinosis gemeldet. Die Organisation der Fleischbeschau in Inowrazlaw scheint trotz der traurigen Erfahrungen, welche man daselbst im vergangenen Winter erst gemacht, noch sehr im Argen zu liegen. Man nimmt an, dass das schädliche Schweinefleisch wiederum wie im Vorjahre mit Umgehung der Kontrolle von auswärts eingeführt ist, aber die Polizeibehörde konnte bisher einen Schuldigen noch nicht ermitteln."

Königsberg (R.-B.) [26 cases, 4 deaths].

See Kossen, 2 (2); Mohrungen, 15; Rogehen, 6 (2); and Schmelz, 3.

Königsberg (R.-B.) [7 cases, 0 death].

Veröff., 1888, p. 135: Vier Ortschaften. This probably belongs with the other outbreaks.

Königs-Wusterhausen, R.-B. Potsdam, October .. 7 cases, 0 death.

Kanzow, 1890, pp. 63, 64: It is not stated whether the meat was inspected. Members of 6 families ate sausage made of raw pork sold at the Jahresmarkt.—Arch. f. anim. Nahrungsmittelk., 1888, IV (3), Dec., p. 40.

Kossen, Kr. Heilsberg, R.-B. Königsberg..... 2 cases, 2 deaths.

Nath, 1891, p. 54: Meat not inspected.

Krupinnen, Kr. Oletzko, R.-B. Gumbinnen, January-February.....

14 cases, 1 death.

Passauer, 1890, p. 106: Hog was slaughtered in December, 1887, and was not inspected, but trichinae were afterwards found.

Mansfeld, R.-B. Merseburg, February..... 6 cases, 0 death.

Wolff, 1890, p. 85: *The hog was inspected and passed as free from trichinae.* On account of the outbreak the meat was reinspected and, during the examination of a large number of preparations, now and then a trichina was found.—Veröff., 1891, p. 245: "Das Fleisch war sehr spärlich mit Trichinen durchsetzt, der Fleischbeschauer konnte einer Fahrlässigkeit nicht beschuldigt werden."—Ostertag, 1895, p. 417.

Marienwerder (R.-B.) [16 cases, 3 deaths].

Michelsen, 1890, pp. 76, 77: No cases given in official report. See, however, Marienwerder, 2; and Thorn, 14 (3).

——, **R.-B. Marienwerder**..... 2 cases, 0 death.

Veröff., 1888, p. 283: Details not given.

Merseburg (R.-B.)..... [6 cases, 0 death].

See Mansfeld.

Mohrungen (Kr.), R.-B. Königsberg, February .. 15 cases, 0 death.

Veröff., 1888, p. 149: 1 case.—Nath, 1891, p. 54: 2 uninspected hogs concerned.—Veröff., 1891, p. 245: 15 cases in 6 villages. Hog not inspected.—Ostertag, 1899, p. 505.

Obergrasmühle bei Iifeld, R.-B. Hildesheim, March. 2 cases, 1 death.

Veröff., 1891, p. 296.—Grun, 1890, p. 46: Meat not inspected.

Oels (Landgericht), R.-B. Breslau 4 cases, 0 death.

Veröff., 1891, Beilage, p. 64*: Some sausage made before the meat was inspected was sold. Trichinae found by two inspectors. Fleischer K., Urtheil, February 8, 1888. Exact date of outbreak not given (1887, 1888).

- Potsdam (R.-B.)** [18 cases, 0 death].
See Königs-Wusterhausen, 7; Templin, 11.
- Rogehen, Kr. Fischhausen, R.-B. Königsberg** 6 cases, 2 deaths.
Nath, 1891, p. 54.—Veröff., 1888, p. 119: 2 deaths.—Veröff., 1891, p. 245: December 31, 1887-January, 1888: 6 cases, 2 deaths. Meat not inspected.—Ostertag, 1895, p. 417: 6 cases, 2 deaths.
- Schleswig-Holstein (R.-B.)** [4 cases, 0 death].
See Stelling.
- Schmelz, Kr. Memel, R.-B. Königsberg** 3 cases, 0 death.
Nath, 1891, p. 54.—Veröff., 1891, p. 245, January: Meat not inspected.—Ostertag, 1899, p. 505.
- Soldorf, Kr. Rinteln, R.-B. Cassel** 3 cases, 0 death.
Rockwitz, 1891, p. 62: *The hog was inspected and passed as free from trichinæ.* "Die Infection war auf den Genuss des Fleisches von Schweinen zurückzuführen, die untersucht und für trichinenfrei erklärt worden waren."
- Stelling, Kr. Pinneberg, R.-B. Schleswig-Holstein** .. 4 cases, 0 death.
Bockendahl, 1889, p. 105: Hog had eaten a rat in the spring and had been sick a long time in the summer.—Veröff., 1891, p. 245: 4 cases, December, in Kr. Pinneberg.—Ostertag, 1895, p. 417.
- Swiniary bei Gnesen, R.-B. Bromberg** 6 cases, 1 death.
Peters, 1890, p. 60: The meat had not been inspected.
- Templin, R.-B. Potsdam** 11 cases, 0 death.
Kanzow, 1890, p. 63: *The hog was inspected and passed as free from trichinæ.* The inspector was made to pay the value of the hog.
- Thorn, R.-B. Marienwerder** 14 cases, 3 deaths.
Veröff., 1891, Beilage, p. 63*: The owner of the hog thought inspection unnecessary. "Im Auftrage der Angeklagten hatte ein Fleischer zwei demselben gehörige Schweine geschlachtet und die Untersuchung auf Trichinen gefordert. Die Angeklagten lehnten dies aber als unnötig ab."

1889: 216 cases, 15 deaths.

Summary for the year.—In a total of 216 cases, 15 deaths, at least 28 cases *were due to meat which was inspected and passed as free from trichinæ.* In at least 50 other cases "it could not be proved that the meat had not been inspected according to regulations." Numerous other cases remain "unexplained;" 14 cases, 6 deaths, were due to condemned meat which was known to be trichinous. The outbreak at Krotoschin is interesting.

No official or other sanitary reports for 1889 are accessible to me for the following Regierungs-Bezirke: Danzig, Liegnitz, Magdeburg, Sigmaringen.

No cases of trichinosis in man for 1889 were found in the official sanitary reports or other sources for the following Regierungs-Bezirke: Aachen (Trost, 1893), Arnberg (Tenholt, 1894, p. 97), Aurich (Quittel, 1894, p. 43), Bromberg (Peters, 1893, pp. 47-49), Cassel (Weiss, 1894, p. 99), Coblenz (Massenbach, 1893), Coeslin (Roth, 1893, p. 88), Cologne (Schwartz, 1893, p. 35), Erfurt (Pippow, 1894, p. 64), Gumbinnen (Passauer, 1893, p. 115), Hannover (Becker, 1894, p. 81), Hildesheim (Grun, 1894, p. 59), Lüneburg (Nöller, 1897, p. 184), Minden (Rapmund, 1894, pp. 101, 133), Münster (Kölker, 1894, p. 66), Oppeln (Schmidtman, 1893, p. 56), Osnabrück (Bit-

ter, 1894, p. 27), Potsdam (Kanzow, 1893), Schleswig-Holstein (Bockendahl, 1893, pp. 92-93), Stade (Bohde, 1893), Stettin (Katerbau, 1893, p. 94), Stralsund (Haselberg, 1894), Trier (Schwartz, 1894, pp. 41, 54), Wiesbaden (Pfeiffer, 1894, p. 36).

Alt-Wartenburg, Kr. Allenstein, R.-B. Königsberg, January
6 cases, 1 death.

Veröff., 1891, p. 245: 6 cases, 1 death.—Nath, 1894, p. 55: 6 cases, 0 death.—
Ostertag, 1895, p. 417, and 1899, p. 505: 6 cases, 1 death.

Ahlsdorf, Hergisdorf, etc., Kr. Mansfeld, R.-B. Merseburg
[18 cases, 0 death].

Veröff., 1891, p. 245.—Ostertag, 1895, p. 417: Cases **unexplained**. See, however, Eisleben.

Berlin and Charlottenburg At least 8 cases, 1 death.

Wernich and Wehmer, 1893, pp. 133, 246: In this official report I found no cases recorded for 1889, 1890, and 1891. See, however, the following entries. The official statistics for Prussia (Preussen, 1897, pp. 188, 189) omit the Berlin cases.

Berlin [3 cases, 0 death].

Barnick, 1897, p. 214: *The hog was inspected in Rosenberg and passed as free from trichinæ*. Four cases occurred in Rosenberg from eating the meat, and "several" (3?) relatives in Berlin ate of a smoked ham from this hog which was sent to them. They became sick with trichinosis. See Rosenberg.

Berlin [8 cases, 0 death].

Ostertag, 1895, p. 411: In 1889 there were 8 cases in Berlin. All of these cases were due to pork sent in from outside of Berlin. [These figures do not agree in all detail with the official statistics].—Ostertag, 1899, p. 497: 8 cases, 0 death.

Berlin [4 cases, 0 death].

Veröff., 1889, p. 199: Stadt. Krankh. Freidrichshain and Bethanien.

Berlin [3 cases, 1 death].

Veröff., 1889, p. 341: Moabit Krankenhaus.

Berlin [1? case, 1 death].

Veröff., 1889, p. 483: Augusta Hospital, 1 death.

Berlin [1 case, 0 death].

Veröff., 1889, p. 567: Augusta Hospital, 1 case.

Breslau (R.-B.) 14 cases, 6 deaths.

Wolff, E., 1893, p. 49: Uncooked pork, which was brought from Kr. Wartenberg, although the meat had been declared trichinous, caused an outbreak of 14 cases, 6 of which were fatal. The owner and the seller were imprisoned for fifteen years. The date and place of this outbreak are not given, but this may be the same epidemic to which Schilling refers (see Wartenberg, 1889-1891).—Prussia, 1897, p. 188: Date not given. Report for 1889-1891.

Burgwenden, Kr. Eckartsberga, R.-B. Merseburg, February
5 cases, 0 death.

Veröff., 1891, p. 245.—Wolff, 1893, pp. 88, 89: *The hog had been inspected and passed as free from trichinæ*. "Dieser [Kreisphysikus] stellte am 16. Februar die Trichinenkrankheit fest und wies in den vorhandenen Vorräthen die Trichinen nach, aber in so geringer Zahl, dass von einem fahrlässigen Verfahren bei der Untersuchung nicht die Rede sein konnte."—Ostertag, 1895, p. 417.—Prussia, 1897, p. 489: " * * * lag ein entschuldbares Uebersehen von Trichinen seitens des Fleischbeschauers vor; sie waren nämlich nur in so spärlicher Zahl vorhanden, dass sie selbst bei genauer Durchmusterung der Präparate schwer entdeckt werden konnten."

Düsseldorf (R.-B.) 20 cases, ? deaths.

Weiss, 1893, p. 137: This Regierungs-Bezirk averages 20 cases per year ("durchschnittlich 20 Erkrankungen jährlich im hiesigen Regierungs-Bezirk"), but unfortunately the details are not given. Report for 1889-1891. It appears possible that Weiss has here simply adopted for 1889-1891 the estimate he made in 1890 based upon the years 1877-1886. The author of "Prussia" (1897, p. 189) accepts Weiss's estimate. The application of the average for 1877-1886 to the years 1889-1891 is, however, open to decided question. Unless cases were actually known for 1889-1891, there is no ground for recording 20 cases per year based upon an average of former years.—Prussia, 1897, p. 189.

Eisleben, Wimmelberg, Ahlsdorf, Hergisdorf, etc., R.-B.

Merseburg, September 50 cases, 0 death.

Wolff, 1893, p. 89: The meat came from a party in Eisleben, in whose household 3 cases occurred. "*It could not be proven that the suspected hog had not been inspected according to regulations.*" *It seems, therefore, probable that the meat which gave rise to the disease was inspected and passed as free from trichinæ.* "Die Sache wurde an die Staatsanwaltschaft zur weiteren Verfolgung abgegeben, doch musste das Verfahren eingestellt werden, weil der Nachweis nicht geführt werden konnte, dass das verdächtige Schwein nicht vorschriftsmässig untersucht worden wäre."—Veröff., 1891, p. 245: 20 cases in Eisleben, 12 in Wimmelberg, 18 in Ahlsdorf, Hergisdorf, etc.—Prussia, 1897, p. 189: It was not possible to demonstrate the source of infection. "Die Infektionsquelle war bei dieser Epidemie * * * nicht mit Sicherheit nachzuweisen."

Fischhausen, Kr. Fischhausen, R.-B. Königsberg, February
7 cases, 1 death.

Veröff., 1889, p. 135: 7 cases.—Veröff., 1891, p. 245: 7 cases, 1 death. Hog had not been examined.—Ostertag, 1895, p. 417, and 1899, p. 505. [Could this be the same as Alt-Powayen, 1890?]

Frankfurt (R.-B.) [8 cases, 0 death].
See Gr. Gandern.

Gr. Gandern, Kr. West-Sternberg, R.-B. Frankfurt. 8 cases, 0 death.

Wiebecke, 1893, p. 70: 6 to 8 persons. *Apparently the meat was inspected and passed as free from trichinæ*, for the meat inspector, who was the sickest of all, was discharged.—Prussia, 1897, p. 188: 8 cases, "wobei der Fleischbeschauer, dem das Amt entzogen wurde, selbst am schwersten erkrankte."

Gr. Peterwitz, Kr. Rosenberg, R.-B. Marienwerder. 3 cases, 0 death.

Barnick, 1897, pp. 214, 215: Hog not inspected, on which account the owner was fined 10 marks.

Halle a. S., R.-B. Merseburg, November 14 cases, 0 death.

Veröff., 1891, p. 245.—Wolff, 1893, p. 89: Source of meat not proved.—Ostertag, 1895, p. 417, and 1899, p. 505: 14 cases in 7 families. Source of infection undetermined ("Die Ursache blieb im letzten [i. e., this] Fall unaufgeklärt").—Prussia, 1897, p. 189.

Hergisdorf.

See Eisleben.

Königsberg (R.-B.) [24 cases, 6 deaths].

Prussia, 1897, p. 188: 5 epidemics in R.-B. Königsberg, with 33 cases, 5 deaths, during the years 1889-1891. *In one case the meat was inspected and passed as free from trichinæ* ["*In einem Falle lag erhebliche Fahrlässigkeit des (deshalb abgesetzten) Fleischbeschauers vor, er hatte das betreffende Fleisch für trichinenfrei erklärt.* Für die anderen Fälle ist es nicht ersichtlich ob das Fleisch überhaupt untersucht

worden war."'] According to my statistics there were 7 outbreaks with 43 cases, 8 deaths, during 1889-1891. For 1889, see Alt-Wartenburg, 6 (1); Königsberg, 3 (1); Fischhausen, 7 (1); Kossen, 8 (3).

Königsberg [R.-B. Königsberg?], December 3 cases, 1 death.
Lewin, 1891: 1 case, 1 death, and "other cases." Trichinae found.

Kossen (Gut), Kr. Heilsberg, R.-B. Königsberg, January
8 cases, 3 deaths.

Veröff., 1889, p. 93: 8 cases, 3 deaths.—Veröff., 1891, p. 245: 8 cases, 2 deaths.
Hog not inspected.—Nath, 1894, pp. 54, 55: 8 cases, 3 deaths.—Ostertag, 1895, p. 417, and 1899, p. 505: Though they do not agree in all detail, probably all of these cases refer to the same outbreak.

Krotoschin [R.-B. Posen?] 3? cases, 2 deaths.

Veröff., 1891, Beilage, p. 64*: Samples were sent to an inspector, who refused to make the examination because he was not appointed for the village in which the hog was slaughtered. Several cases, 2 deaths.

Löbau, R.-B. Marienwerder 5 cases, 0 death.
Prussia, 1897, p. 188.

Magdeburg (R.-B.) [50 cases, 0 death].
See Rogätz.

Marienwerder (R.-B.) [12 cases, 0 death].
See Löbau, 5; Gr. Peterwitz, 3; and Rosenberg, 4.
Prussia, 1897, p. 188.

Merseburg (R.-B.) [69 cases, 0 death].
See Burgwenden, 5; Eisleben, 50; and Halle, 14.

Opalenitz, Kr. Grätz, R.-B. Posen, September 8 cases, 0 death.
Veröff., 1891, p. 245: "*Grobe Pflichtwidrigkeit eines Fleischbeschauers.*" The hog was evidently inspected and passed as free from trichinae.—Géronne, 1894, p. 121: "*Als Ursache konnte grobe Pflichtwidrigkeit eines Fleischbeschauers festgestellt werden.*"—Ostertag, 1899, p. 505.

Posen (R.-B.) [11 cases, 2 deaths].
See Krotoschin, 3 (2); and Opalenitz, 8.

Prussia, 1897, p. 188: "Im Regierungs-Bezirk Posen wurden 44 Fälle (darunter vier Todesfälle) bekannt; in zwei Fällen wurden die Fleischbeschauer arger Fahrlässigkeit überführt und gerichtlich verurtheilt."

Rogätz, R.-B. Magdeburg, September-October ... 50 cases, 0 death.
Archiv f. anim. Nahrungsmittelk., 1889, V (2), p. 28: "Im Laufe des September und Oktober d. J. erkrankten in Rogätz (Rbg. Magdeburg) ca. 50 personen an der Trichinosis. Bei 15 Patienten waren die Krankheitserscheinungen recht schwer, doch wurden Todesfälle nicht beobachtet."

Rosenberg, R.-B. Marienwerder 4 cases, 0 death.
Barnick, 1897, p. 214: *The hog, home-slaughtered, was inspected and passed as free from trichinae.* Several relatives in Berlin were also taken sick as a result of eating of the meat. The inspector's license was annulled, and he was imprisoned for two months.—Veröff., 1889, p. 235: 5 cases for Kreis Rosenberg.—Prussia, 1897, p. 188: 7 cases in Kreis Rosenberg. See also Gr. Peterwitz.

Wartenburg (near), March-April [15 cases, 4 deaths].

Schilling, 1889, pp. 289-291: The hog, slaughtered February 26, had been condemned. It was insured, and the butcher received the insurance. Instead of destroying the carcass, he gave some of it to his relatives and sold the rest. Cases belonging to this outbreak occurred in "Städten B. und O." See Breslau.

Wimmelberg, R.-B. Merseburg, September----- [12 cases, 0 death].

See Eisleben.

Veröff., 1891, p. 245.—Ostertag, 1895, p. 417.

1890: 96 cases, 0 death.

Summary for the year.—In a total of 96 cases, 0 death, *11 cases were due to pork which was inspected and passed as free from trichinæ.* Eleven cases were due to sausage imported from Russian Poland. The 8 cases in Johannisburg district and the subsequent trial shed a light on the German system. The outbreak of 3 cases in Kr. Witkowo is interesting as showing that a microscopic inspection can not be guaranteed.

No official-or other sanitary reports for 1890 are accessible to me for the following Regierungs-Bezirke: Danzig, Liegnitz, Magdeburg, Sigmaringen.

No cases of trichinosis in man for 1890 were found in the official sanitary reports or other sources for the following Regierungs-Bezirke: Aachen (Trost, 1893), Arnberg (Tenholt, 1894, p. 97), Aurich (Quittel, 1894, p. 43), Breslau (Wolff, E., 1893, p. 49), Cassel (Weiss, 1894, p. 94), Coblenz (Massenbach, 1893), Cologne (Schwartz, 1893, p. 35), Coeslin (Roth, 1893, p. 88), Erfurt (Pippow, 1894, p. 64), Hannover (Becker, 1894, p. 81), Hildesheim (Grun, 1894, p. 59), ? Königsberg (Nath, 1894, p. 55), Lüneburg (Nöller, 1897, p. 184), Merseburg (Wolff, 1893, p. 89), Minden (Rapmund, 1894, pp. 101, 133), Münster (Kölker, 1894, p. 66), Oppeln (Schmidt-mann, 1893, p. 56), Osnabrück (Bitter, 1894, p. 27), Potsdam (Kanzow, 1893), Schleswig-Holstein (Bockendahl, 1893, pp. 92, 93), Stade (Bohde, 1893), Stettin (Katerbau, 1893, p. 94), Stralsund (Haselberg, 1894), Trier (Schwartz, 1894, pp. 41, 54), Wiesbaden (Pfeiffer, 1894, p. 36).

Alt-Powayen, Kr. Fischhausen, R.-B. Königsberg-----

[7 cases, 2 deaths].

Nath, 1894, p. 55: Rauchwurst. There is evidently a mistake somewhere.

The date may be a misprint for 1889 or 1891, for on the same page Nath states:

“Das Jahr 1890 blieb frei.” Could this be the same as Fischhausen, 1889?

Berlin and Charlottenburg----- [1 case, 0 death].

Wernich and Wehmer, 1893, pp. 133, 246: No cases recorded in official report for 1889-1891. See, however, below.

Berlin----- [1 case, 0 death].

Veröff., 1890, p. 49: Friedrichshain Hospital.

Bromberg (R.-B.)----- [23 cases, 0 death].

See Bromberg, 11; Witkowo, 3, 7; Wongrowitz, 2.

——, R.-B. Bromberg----- 11 cases, 0 death.

Peters, 1893, p. 48: Family and friends of a physician. Exact locality not given. Sausage was imported from Russian Poland (“Die Wurst war aus Russisch-Polen importirt”).—Prussia, 1897, p. 188: 1889-1891, 5 epidemics with 24 cases, 0 death, in R.-B. Bromberg. “In einem Fälle, wo elf Personen erkrankten, handelte es sich um ungeräucherte, nur getrocknete und aus Russisch-Polen eingeführte Wurst. Angesichts dieses Vorkommnisses ist durch eine Polizei-Verordnung vom 29. März 1889 [1890?] die obligatorische Untersuchung des aus Russland eingeführten Schweinefleisches angeordnet worden.”

Budzyn (Gut), Kr. Schrim, R.-B. Posen----- 16 cases, 0 death.

Géronne, 1894, p. 121.

- Culm (Kr.), R.-B. Marienwerder** 4 cases, 0 death.
 Zeitschr. f. Fleisch- und Milchhyg., 1891, I (4), January, p. 67: Several light cases.—Barnick, 1897, p. 215: Meat not inspected.—Prussia, 1897, p. 188.
- Deutsch Krone, R.-B. Marienwerder** 1 case, 0 death.
 Finger, 1894a: Young hog was sick; when killed not examined.—Finger, 1894b, pp. 376-381: An interesting case of localized trichinosis.—Prussia, 1897, p. 188.
- Düsseldorf (R.-B.)** 20 cases, ? death.
 Weiss, 1893, p. 137: See remarks under 1889.
- Frankfurt (R.-B.)** [20 cases, 0 death].
 See Reppen.
- Gumbinnen (R.-B.)** [11 cases, 0 death].
 See Johannesburg, 3, 8.
 Passauer, 1893, pp. 111-115, apparently does not mention any cases in his official report, but Esser and Schütz record two outbreaks in Johannesburg Kreis.
- Johannisburg (Kr.), [R.-B. Gumbinnen] (1890-1891)** .. 3 cases, 0 death.
 Esser and Schütz, 1894, p. 57: Hog was not inspected. "Several" cases. One woman aborted.
- Johannisburg (Kr.), [R.-B. Gumbinnen] (1890-1891)** .. 8 cases, 0 death.
 Esser and Schütz, 1894, pp. 55-57: *The hog was inspected and passed as free from trichinæ.* In the trial of the inspector it was proved that he knew nothing about his business. Esser and Schütz do not state how many other hogs this inspector had examined, but District Veterinarian Kleinpaul says that the trichina inspection of the Johannesburg district is very poor. With this statement by a Government official in hand, the Germans have, nevertheless, accepted the statistics furnished by men whom their own officials acknowledge as totally incompetent to furnish the data, and who even have no conception of the methods of inspection.
- Königsberg (R.-B.)** [7 cases, 2 deaths].
 See Alt-Powayen. Omit from statistics; probably belongs to 1889.
- Marienwerder (R.-B.)** [5 cases, 0 death.]
 See Culm, 4; Deutsch Krone, 1.
- Opalenitza, Kr. Graetz, and in Kr. Schrim, R.-B. Posen**
 [16 cases, 0 death].
 Veröff., 1894, p. 209.—Ostertag, 1895, p. 417, and 1899, p. 506: See Budzyn; probably the same.
- Posen (R.-B.)** [16 cases, 0 death].
 See Budzyn, 16; and Opalenitza.
- Reppen, R.-B. Frankfurt** 20 cases, 0 death.
 Wiebecke, 1893, p. 70: About 20 persons taken sick. Details not given. Not stated whether the meat was inspected or not, although inspection is obligatory in 20 Kreisen.—Prussia, 1897, p. 188.
- Witkowo (Kr.), R.-B. Bromberg, January** 3 cases, 0 death.
 Peters, 1893, pp. 47, 48: *The hog was inspected and passed as free from trichinæ.* Afterwards trichinæ were found, but not until a large number of preparations were made. It was admitted that even in a case of careful examination the trichinæ could escape detection. "Bei der mikroskopischen Untersuchung des Rauchfleisches fanden sich vereinzelt Trichinen, jedoch erst nach Anfertigung einer grösseren Zahl von Präparaten. Die erkrankten Personen hatten das in Rede stehende Fleisch in rohem Zustande genossen und waren nur leicht erkrankt; fünf

andere Personen der Familie, die von demselben rohen Fleisch gegessen hatten, zeigten gar keine Krankheitserscheinungen. Da hiernach und auf Grund des ärztlichen Befundes angenommen werden musste, dass auch bei genauer Untersuchung durch den Fleischbeschauer, der das Fleisch für trichinenfrei erklärt hatte, die Trichinen hätten unentdeckt bleiben können, so wurde von Seiten der Staatsanwaltschaft von der Erhebung einer Anklage gegen den als sehr gewissenhaft bekannten Fleischbeschauer, einen Lehrer, Abstand genommen."

Witkowo (Kr.), R.-B. Bromberg, May 7 cases, 0 death.

Peters, 1893, p. 48: The infection came from some sausage and pork eaten twelve days before, and obtained from butchers in Gnesen and Tremessen. Microscopic inspection of what remained was negative.

Wongrowitz (neighborhood of), R.-B. Bromberg, August.....

2 cases, 0 death.

Peters, 1893, p. 48: Source of infection could not be determined.

1891: 175 cases, 12 deaths.

Summary for the year.—In a total of 175 cases, 12 deaths, at least 116 cases, 10 deaths, *were due to meat which was inspected and passed as free from trichinæ.* American pork began to be imported toward the end of this year, but not a single case of trichinosis is reported as due to such pork.

No official sanitary reports for 1891 are accessible to me for the following Regierungs-Bezirke: Danzig, Magdeburg, Sigmaringen.

No cases of trichinosis in man have been found in the official sanitary reports or other sources for the following Regierungs-Bezirke: Aachen (Trost, 1893), Aurich (Quittel, 1894, p. 43), Breslau (Wolff, E., 1893, p. 49), Cassel (Weiss, 1894, p. 99), Coblenz (Massenbach, 1893), Coeslin (Roth, 1893, p. 88), Cologne (Schwartz, 1893, p. 35), Erfurt (Pippow, 1894, p. 64), Frankfurt (Wiebecke, 1893, p. 70), Gumbinnen (Passauer, 1893, pp. 111, 115), Hannover (Becker, 1894, p. 81), Hildesheim (Grun, 1894, p. 59), Lüneburg (Nöller, 1897, p. 184), Marienwerder (Barnick, 1897, pp. 214, 215), Minden (Rapmund, 1894, pp. 101, 133), Münster (Kölker, 1894, p. 66), Oppeln (Schmidtman, 1893, p. 61), Osnabrück (Bitter, 1894, p. 27), Schleswig-Holstein (Bockendahl, 1893, pp. 92, 93), Stade (Bohde, 1893), Stralsund (Haselberg, 1894), Trier (Schwartz, 1894, pp. 41, 54), Wiesbaden (Pfeiffer, 1894, p. 36).

Altena, R.-B. Arnsberg, October..... 40 cases, 0 death.

Zeitschrift f. Fleisch- und Milchhygiene, 1891, II (3), December, pp. 60, 61: More than 30.—Tenholt, 1894, p. 97: There is some doubt as to whether the meat was inspected or not.—Veröff., 1895, p. 118.—Prussia, 1897, p. 189. "Der Schlachthaus-Inspektor selbst, ein approbierter Tierarzt, hatte ein Schwein mit der amtlichen Beglaubigung, dass es untersucht und trichinenfrei sei, dem freien Verkehre überlassen; erst etwa 14 Tage später stellte es sich heraus dass das Fleisch dieses Schweines förmlich mit Trichinen wie übersät war. An dem Tage, als dieses stark trichinöse Schwein in dem Schlachthause untersucht wurde, hatte derselbe Tierarzt im ganzen 20 Schweine mikroskopisch zu untersuchen und es deshalb erklärlich, dass das Ergebniss der Untersuchung kein zuverlässiges war. Im ganzen wurden in Altena 1889-1891 unter 30,267 untersuchten Schweinen nur drei (!) trichinöse gefunden." According to this account, therefore, *the hog was inspected and passed as free from trichinæ.* That a man can not inspect 20 hogs in one day does not, however, speak much for his ability as a microscopist.

Arnsberg (R.-B.) [40 cases, 0 death].

See Altena.

- Berlin** 1 case, 0 death.
Veröff., 1891, p. 135: St. Hedwig's hospital.—Wernich and Wehmer, 1893, pp. 133, 246: Do not record any cases for Berlin or Charlottenburg in their official statistics.
- Bromberg (R.-B.)** [1 case, 0 death].
See Wongrowitz.
- Düsseldorf (R.-B.)** 20 cases, ? deaths.
Weiss, 1893, p. 137: An average of 20 cases per year.
- Garby, Kr. Schroda, R.-B. Posen** [6 cases, 1 death].
Veröff., 1894, p. 209: *The hog was inspected and passed as free from trichinæ.* The inspector was imprisoned for 6 months.—Ostertag, 1895, p. 417, and 1899, p. 506.—Géronne, 1894, pp. 121–123: “Wurde seitens des Gerichts die Schuld des Fleischbeschauers an dem Ausbruche der Trichinose für erwiesen angenommen und dieser wegen fahrlässiger Tödtung zu 6 Monaten Gefängniss verurtheilt.”
- Graetz, Kr. Graetz, R.-B. Posen** [6 cases, 0 death].
Veröff., 1894, p. 209.—Ostertag, 1895, p. 417, and 1899, p. 506.—Géronne, 1894, p. 121.
- Gr. Purden, Kr. Allenstein, R.-B. Königsberg, January**
7 cases, 0 death.
Nath, 1894, p. 55: Raw sausage.—Veröff., 1894, p. 209.—Ostertag, 1895, p. 417: The meat was eaten before the hog was inspected. Afterwards it was found to contain numerous trichinæ.
- Jersitz, R.-B. Posen** [2 cases, 0 death].
Zeitschr. f. Fleisch- und Milchhyg., 1891, I (8), Mai, p. 142: Source of meat could not be traced.
- Königsberg (R.-B.)** [16 cases, 0 death].
Veröff., 1891, p. 105: Reports 11 cases, 0 death. See Gr. Purden, 7; Kutzburgmühle, 5; Soldau, 4.
- Kutzburgmühle, Kr. Ortelsburg, R.-B. Königsberg** 5 cases, 0 death.
Veröff., 1894, p. 209: *The hog was inspected and passed as free from trichinæ.*—Nath, 1894, p. 55: Hog inspected and passed.—Ostertag, 1895, p. 417.
- Liegnitz (R.-B.)** [61 cases, 8 deaths].
See Mühlrädltz, 55 (6); and Würchland, 6 (2).
- Merseburg (R.-B.)** [3 cases, 0 death].
See Weissenfels.
- Mühlrädltz, Kr. Lüben, R.-B. Liegnitz** 55 cases, 6 deaths.
Zeitschr. f. Fleisch- und Milchhyg., 1891, I (12), September, p. 223.—Idem, 1891, II (1), October, p. 18.—Idem, 1892, II (7), April, p. 143.—Philipp, 1896, p. 110.
The hog was inspected and passed as free from trichinæ. The inspector was imprisoned one year. In this and the Glogau outbreaks, there were together 8 deaths, but this report does not state where the deaths were. As Veröff., 1893, p. 291, refers to an outbreak in Liegnitz of more than 25 cases, with 6 deaths, *due to a hog which was inspected and passed as free from trichinæ*, and where the inspector was imprisoned for a year, I assume that the outbreak is the one here cited.—Prussia, 1897, pp. 188, 189: “In beiden Fällen [s. also Würchland] war arge Nachlässigkeit des (übrigens zu Gefängniss verurtheilten) Fleischbeschauers die Ursache der Epidemie.”

- M., Court Liegnitz, R.-B. Liegnitz** [25 cases, 6 deaths].
 Veröff., 1893, p. 291: *The hog was inspected and passed as free from trichinæ.*
 Inspector, who had not carried out regulations, was imprisoned for one year. More than 25 cases, 6 fatal. See Mühlrädltz.
- Posen (R.-B.)** 24 cases, 4 deaths.
 Veröff., 1891, reports 24 cases, 0 death, as follows: p. 151, 3 cases; p. 171, 1 case; p. 187, 4 cases; p. 239, 1 case; p. 253, 2 cases; p. 273, 4 cases; p. 317, 3 cases; p. 695, 6 cases. See Garby, 6 (1); Graetz, 6; Jersitz, 2; Schrimm, 8 (3).
- Potsdam (R.-B.)** [1 case, 0 death].
 See Ruppın.
- Ruppın, R.-B. Potsdam** 1 case, 0 death.
 Kanzow, 1893, p. 92: Patient ate raw meat, though warned not to do so.
- Schrimm (Kr.), R.-B. Posen** [8 cases, 3 deaths].
 Veröff., 1894, p. 209.—Ostertag, 1895, p. 417, and 1899, p. 506.—Gérone, 1894, p. 121: Stadt Kurnik and Daszewice, Kr. Schrimm.
- Soldau, Kr. Niedenburg, R.-B. Königsberg** 4 cases, 0 death.
 Zeitschr. f. Fleisch- und Milchhyg., 1892, II (4), January, p. 81: From Allg. Fl. Zeitung. Four soldiers ate raw meat. *Hog had been officially inspected and passed as free from trichinæ.*
- Stettin (R.-B.)** [8 cases, 0 death].
 See Stettin (Stadt).
- Stettin, R.-B. Stettin, May** 8 cases, 0 death.
 Veröff., 1894, p. 209.—Ostertag, 1895, p. 417.—Katerbau, 1893, p. 94: Ham came from Memel. It is not stated whether or not it was inspected. Patients in 3 families.—Prussia, 1897, p. 188.
- Weissenfels, R.-B. Merseburg, August** 3 cases, 0 death.
 Wolff, 1893, p. 89: Cases contracted in Schlesien.
- Wongrowitz (Kr.), R.-B. Bromberg** 1 case, 0 death.
 Peters, 1893, pp. 48, 49: A laborer had his hog killed, but did not have it inspected.—Siedamgrotzky, 1896, p. 51: He was imprisoned one day.
- Würchland, Kr. Glogau, R.-B. Liegnitz** 6 cases, 2 deaths.
 Philipp, 1896, p. 110: *The hog was inspected and passed as free from trichinæ.* The inspector excused himself by stating that he had not been properly instructed in the course he had taken. "Der Fleischbeschauer im Kreise Glogau hatte zu seiner Entschuldigung angeführt, dass er bei dem ihm erteilten Unterricht nicht besondere Belehrung darüber erhalten habe, wie die Fleischproben von dem Schweine zu entnehmen und brauchbare mikroskopische Präparate anzufertigen."—Zeitschr. f. Fleisch- und Milchhyg., 1891, I (10), July, p. 183: Glogau and Würchland, 2 deaths.—Prussia, 1897, pp. 188, 189.

1892: 108 cases, 4 deaths.

Summary for the year.—In a total of 108 cases, 4 deaths, 19 cases, 1 death, appears to have been *due to meat which was inspected and passed as free from trichinæ.* In a number of cases it is not definitely reported whether they were due to inspected or uninspected meat. From the records published thus far, the meat appears to have been definitely traced in 8 outbreaks (63 cases, 4 deaths). In the case of

2 outbreaks (Köthen 40 cases, Mohrunen 5 cases) nothing is said of the source of infection; it would seem strange, however, if the source were not traced in an outbreak of 40 cases. Not a single case is reported as being due to American pork.

The official sanitary reports for this year are not accessible to me for the following Regierungs-Bezirke (probably they are not yet published): Arnsberg, Magdeburg Münster, Osnabrück.

No cases of trichinosis in man during 1892 have been found in the official sanitary reports or other sources for the following Regierungs-Bezirke: Aachen (Schlegten-dal, 1898, p. 92), Aurich (Quittel, 1896, p. 90), Berlin and Charlottenburg (Wernich and Springfield, 1897 pp. 153, 371), Cassel (Weiss, 1896, p. 108), Coblenz (Wehmer, 1897), Coeslin (Grisar, 1896, pp. 82, 116), Cologne (Weyhöfer, 1897), Düsseldorf (Michelsen, 1897), Erfurt (Pippow, 1897, p. 82), Gumbinnen (Passauer, 1896, p. 149), Hannover (Becker, 1897, pp. 75, 89), Hildesheim (Grun, 1897), Liegnitz (Philipp, 1896, p. 110), Lüneburg (Nöller, 1897, p. 184), Marienwerder (Barnick, 1897, pp. 214, 215), Merseburg (Wolff and Penkert, 1896, p. 131), Minden (Rapmund, 1897, pp. 95, 133), Oppeln (Roth, 1896, p. 108), Schleswig-Holstein (Bockendahl, 1895, pp. 84, 85), Sigmaringen (Schmidt, 1897, p. 71), Stade (Rusak, 1897, p. 94), Stettin (Katerbau, 1896, p. 108), Stralsund (Haselberg, 1898), Trier (Schwartz, 1897, p. 62), Wiesbaden (Pfeiffer, 1897, p. 24).

Breslau (R.-B.) [3 cases, 0 death.]

See Karbitz.

Bromberg (R.-B.) [12 cases, 0 death.]

See Twierdzyn.

Danzig (R.-B.) [8 cases, 1 death.]

Borntraeger, 1897, p. 106: "Trichinose ist nicht vorgekommen." See, however, Leske, 8 (1).

Dembicz (Gut) bei Schroda, Kr. Schroda, R.-B. Posen, Jan-

uary 4 cases, 1 death.

Schmidt, 1897, p. 150: The hog had not been inspected but was later found to be trichinous.—*Zeitschr. f. Fleisch- und Milchhyg.*, 1892, II (6), März, p. 122: This reference may belong here: "Die Familie eines Schmiedes. Dieser hatte ein Schwein geschlachtet, in unglaublicher Verblendung sich aber etwas Fleisch von einem Schlächtermeister geben und dieses an Stelle der Proben von seinem eigenen Schweine untersuchen lassen."

Frankfurt (R.-B.) [4 cases, 1 death.]

See Mietzelfelde.

Karbitz, Kr., Militsch, R.-B. Breslau 3 cases, 0 death.

Alexander, 1898, p. 106: *Meat was evidently inspected and passed as free from trichina.* "Der Fleischbeschauer, der einer grossen Fahrlässigkeit bei der Untersuchung überführt wurde, wurde seines Amtes entsetzt und wegen fahrlässiger Körperverletzung zu 6 Wochen Gefängniss verurtheilt." No other cases are mentioned for 1892-1894.

Königsberg (R.-B.) [10 cases, 0 death.]

See Magergut, 5; Mohrunen, 5.

Veröff., 1894, p. 209, and Ostertag, 1895, p. 417, cite 4 cases, 0 death, for this Regierungs-Bezirk. It is not clear whether the citation refers to the Magergut outbreak or not.

Köthen [Kr. Oberbarnim, R.-B. Potsdam, or in Anhalt?]-.....

40 cases, 0 death.

Zeitschr. f. Fleisch- und Milchhyg., 1892, II (12), Sept., p. 250: "Eine Trichinen-Epidemie ist in Köthen ausgebrochen. Glücklicherweise sind nur ca. 40 Personen und diese durchweg leicht erkrankt."

Kosten, R.-B. Posen, September 21 cases, 0 death.

Zeitschr. f. Fleisch- und Milchhyg., 1892, III (2), November, p. 43: "Wen das Verschulden hieran trifft, konnte noch nicht ermittelt werden;" 20 cases.—Schmidt, 1897, p. 150: All ate meat obtained from the same butcher. Microscopic examination of what remained was negative. "Da wohl das sämtliche Fleisch des betreffenden Schweines inzwischen verkauft worden war."

Leske [Kr. Marienburg, R.-B. Danzig?]-..... 8 cases, 1 death.

Zeitschr. f. Fleisch- und Milchhyg., 1892, III (5), February, p. 100: "Ist die Familie und das Gesinde eines Gutsbesitzers stark an Trichinosis erkrankt. Das Dienstmädchen erlag der Krankheit. Der Gutsbesitzer hatte zum Hausgebrauche 3 Schweine geschlachtet, welche bei der nachträglich veranlassenden Untersuchung sich sämtlich als stark mit Trichinen durchsetzt herausstellten."—Archiv f. animal. Nahrungsmittelk., 1892, VII (6-7), p. 92: "In Folge des Genusses von Schweinefleisch ist die ganze Familie Sch. in Leske—Frau und fünf Kinder und eine zum Besuche sich dort aufhaltende Verwandte aus Neuteich an der Trichinose schwer erkrankt."

Magergut, Kr. Osterode, R.-B. Königsberg 5 cases, 0 death.

Nath, 1897, p. 106: 1 person from Brückendorf; the other four belonged to one family. Meat salted and smoked. Cooked cured meat from same animal did no harm.

Mietzelfelde bei Soldin, R.-B. Frankfurt 4 cases, 1 death.

Frankfurt, 1896, p. 68: *It would appear that the meat was inspected and passed as free from trichinæ*, since the inspector resigned; "In Mietzelfelde bei Soldin wurden 4 Personen von Trichinose befallen, von denen ein bereits anderweitig erkranktes Kind starb. Der Fleischbeschauer legte sein Amt nieder." Exact date (1892, 1893, or 1894) not given.

Mohrungen, R.-B. Königsberg 5 cases, 0 death.

Zeitschr. f. Fleisch- und Milchhyg., 1892, II (6), March, p. 122: From Allg. Fl. Z. [See Magergut, Kr. Osterode, 5 cases. Could these possibly be the same?]

Posen (R.-B.) [31 cases, 2 deaths].

See Dembicz, 4 (1); Kosten, 21; and Samolentsch, 6 (1).—Veröff., 1892, p. 731, reports 10 cases, 0 death, and 1894, p. 209: 22 cases, 3 deaths. I am unable to interpret the statistics as given by the Gesundheitsamt.—Ostertag, 1895, p. 417: records 22 cases, 0 death.

Potsdam (R.-B.) [40 cases, 0 death].

See Köthen. No cases have been found in Kanzow's (1897) official report.

Samolentsch, Kr. Samter, R.-B. Posen, March 6 cases, 1 death.

Schmidt, 1897, p. 150: Examination of meat which remained was negative. Diagnosis was made on symptoms. It is not stated whether trichinæ were found on postmortem.

Twierdzyn (Rittergut), Kr. Mogilno, R.-B. Bromberg, March ..

12 cases, 0 death.

Siedamgrotzky, 1896, p. 51: 9 persons in one place and "several" others at other places. Two hogs were slaughtered. *They were inspected and passed as free from trichinæ*, but were later reexamined and found to be trichinous.

1893: 28 cases, 1 death.

Summary for the year.—In a total of 28 cases, 1 death, *at least 7 cases are reported as due to meat which had been inspected and passed as free from trichinæ.* Of the remaining 21 cases, 2 outbreaks (5 cases) are simply mentioned without any reference to the source of infection. In 2 outbreaks (6 cases, 1 death) the meat appears to have been definitely traced, while in 10 cases (Berlin 9, Zeits 1) the statement is made that the meat had been brought from other places. Hence, the source of infection **appears to** have been definitely traced, but the source of the meat is not definitely stated. Not a single case is reported as being due to American pork.

The official sanitary reports for this year are not accessible to me for the following Regierungs-Bezirke: Arnsberg, Münster, Osnabrück.

No cases of trichinosis in man during 1893 have been found in the official sanitary reports or other sources for the following Regierungs-Bezirke: Aachen (Schlegtendal, 1898, p. 92), Aurich (Quittel, 1896, p. 90), Breslau (Alexander, 1898), Bromberg (Siedamgrotzky, 1896, pp. 51, 52), Cassel (Weiss, 1896, p. 108), Coblenz (Wehmer, 1897), Coeslin (Grisar, 1896, pp. 82, 83), Cologne (Weyhöfer, 1897), Danzig (Born-träger, 1897, p. 160), Düsseldorf (Michelsen, 1897), Erfurt (Pippow, 1897, p. 82), Frankfurt (Frankfurt, 1896, p. 68), Gumbinnen (Passauer, 1896, p. 149), Hannover (Becker, 1897, pp. 75, 89), Hildesheim (Grun, 1897), Liegnitz (Philipp, 1896, p. 110), Lüneburg (Nöller, 1897, p. 184), Marienwerder (Barnick, 1897, pp. 214, 215), Minden (Rapmund, 1897, p. 95), Oppeln (Roth, 1896, p. 108), Potsdam (Kanzow, 1897), Schleswig-Holstein (Bockendahl, 1895), Sigmaringen (A. Schmidt, 1897, p. 71), Stade (Rusak, 1897, p. 94), Stettin (Katerbau, 1896, p. 108), Stralsund (Haselberg, 1898), Trier (Schwartz, 1897, p. 62).

Berlin 9 cases, 0 death.

Wernich and Springfield, 1897, pp. 153, 371: No cases of trichinosis officially known in Berlin and Charlottenburg for 1893, but Veröff., 1896, XX, p. 235, reports 9 cases for this year, while Ostertag (Zeitschr. f. Fleisch- und Milchhyg., 1896, VI (12), September, p. 245, and 1899, p. 497) states that there were 9 cases during 1893 and 1894, due to pork which was brought into the city by private parties.

Braunsberg, R.-B. Königsberg [3 cases, 0 death].

Zeitschr. f. Fleisch- und Milchhyg., 1893, IV (2), November, p. 39: "Several" cases. Meat sold before the inspection was finished. Seller imprisoned one month. "In Braunsberg (Ost-Preussen) sind mehrere Personen nach Genuss von Schweinefleisch an Trichinosis erkrankt. Das Fleisch war verkauft worden, ehe die Untersuchung auf Trichinen beendet war. Die Verkäufer des Fleisches wurden daher zu je, 1 Monat Gefängniss verurtheilt." See Schillgehnen.

Frankfurt a. M., R.-B. Wiesbaden 2 cases, 0 death.

Veröff., 1893, p. 409: Hospitals. No details given.—Zeitschr. f. Fleisch- und Milchhyg., 1896, VI (12), September, p. 245: Taken from Veröff. Details not given.

Genthin, Kr. Jerichow, R.-B. Magdeburg 3 cases, 0 death.

Zeitschr. f. Fleisch- und Milchhyg., 1893, III (7), April, p. 153: *Meat had been inspected and passed as free from trichinæ.* "In Genthin erkrankten nach der Deutschen Fleischer Ztg. mehrere Personen in Folge Genusses von Schweinefleisch, welches durch den Trichinenschauer untersucht und als trichinenfrei bezeichnet worden war. Die Nachuntersuchung de Fleisches ergab starken Trichinengehalt."

Königsberg (R.-B.) ----- [10 cases, 1 death].
See [Braunsberg, 3]; Pillau, 4; Saalfeld, 3; Schillgehn, 3 (1).

Magdeburg (R.-B.) ----- [3 cases, 0 death].
See Genthin.

Merseburg (R.-B.) ----- [1 case, 0 death].
See Zeitz.

Pillau, Kr. Fischhausen, R.-B. Königsberg ----- 4 cases, 0 death.
Nath, 1897, p. 106: *The hog was inspected and passed as free from trichinæ.*—*Zeitschr. f. Fleisch- und Milchhyg.*, 1893, III (7), April, p. 153: The entire family of a ship's captain. (Probably belongs here.)—*Veröff.*, 1893, p. 112: Probably belongs here

Posen (R.-B.) ----- 3 cases, 0 death.
Schmidt, 1897, p. 150: Says no cases were known for 1893, but *Veröff.*, 1893, p. 317, records 3 cases, without details.

Saalfeld, Kr. Mohrungen, R.-B. Königsberg ----- 3 cases, 0 death.
Zeitschr. f. Fleisch- und Milchhyg., 1893, III (11), Aug., p. 229: Hog slaughtered by two butchers and divided before the meat was inspected.—Nath, 1897, p. 106: Meat had not been inspected.

Schillgehn, Kr. Braunsberg, R.-B. Königsberg, February --
3 cases, 1 death.

Nath, 1897, p. 106: The meat was not inspected until after part of it had been eaten. Ostertag's reference to Braunsberg (see above) probably belongs here; probably also his reference (*Zeitschr. f. Fleisch- und Milchhyg.*, 1893, III (7), April, p. 153) to "Schillgehn."

Zeitz (Kr.), R. B. Merseburg ----- 1 case, 0 death.

Wolff and Penkert, 1896, p. 131: Meat came from some other place. "Bei einem Arbeiter, der von auswärts bezogenes Schweinefleisch genossen hatte. Ein bei diesem Arbeiter am 2. Februar 1894 geschlachtetes Schwein fand sich bei der Untersuchung trichinös, so dass der Physikus vermuthet, dass das Schwein durch Verzehren von Kothabgängen des Arbeiters während seiner Krankheit infiziert worden ist."

Wiesbaden (R.-B.) ----- [2 cases, 0 death].
Pfeiffer, 1897, p. 24: "Rotz und Trichinose kamen nicht zur Kenntniss der Aufsichtsbehörde." See, however, Frankfurt.

1894: 72 cases, 5 deaths.

Summary for the year.—In a total of 72 cases, 5 deaths, at least 40 cases, 1 death, *appear to have been due to meat which was inspected and passed as free from trichinæ.* Seven cases, 1 death, were due to pork of Russian origin. In Punitz, 3 cases, 1 death, were due to meat which was condemned but afterwards stolen and eaten. Of the remaining 22 cases, 2 deaths, the hog was traced in at least 4 cases, 2 deaths. The meat was traced in at least 5 cases, while in 13 cases the source of infection could not be established. In not a single case is it even alleged that the disease was due to American pork. All the cases were confined to the four Regierungs-Bezirke of Berlin, Bromberg, Königsberg, and Posen.

Official or other sanitary reports for the following Regierungs-Bezirke are not accessible to me: Arnberg, Danzig, Erfurt, Magdeburg, Münster, Osnabrück.

No cases of trichinosis in man during 1894 were found in the official sanitary reports or elsewhere for the following Regierungs-Bezirke: Aachen (Schleghtendal, 1898, p. 92), Aurich (Quittel, 1896, p. 90), Berlin (Wernich and Springfield, 1897, p. 371), Breslau (Alexander, 1898), Cassel (Weiss, 1896, p. 108), Coblenz (Wehmer, 1897), Coeslin (Grisar, 1896, pp. 82, 116), Cologne (Weyhöfer, 1897), Düsseldorf (Michelsen, 1897), Erfurt (Pippow, 1897, p. 82), Frankfurt (Frankfurt, 1896, p. 68), Gumbinnen (Passauer, 1896, p. 149), Hannover (Becker, 1897, pp. 75, 89), Hildesheim (Grun, 1897, p. 63), Liegnitz (Philipp, 1896, p. 111), Lüneburg (Nöller, 1897, p. 239), Marienwerder (Barnick, 1897, pp. 214, 215), Merseburg (Wolff and Penkert, 1896, p. 131), Minden (Rapmund, 1897, p. 95), Oppeln (Roth, 1896, p. 108), Potsdam (Kanzow, 1897), Schleswig-Holstein (Bockendahl, 1895, pp. 84, 85), Sigmaringen (Schmidt, 1897, p. 71), Stade (Rusak, 1897, p. 94), Stettin (Katerbau, 1896, p. 108), Stralsund (Haselberg, 1898), Trier (Schwartz, 1897, p. 62), Wiesbaden (Pfeiffer, 1897, p. 24).

Bromberg (R.-B.) [19 cases, 0 death].

See Filehne, 8; Gnesen, 1; and Putzig, 10.

Filehne, Kr. Filehne, R.-B. Bromberg 8 cases, 0 death.

Siedamgrotzky, 1896, pp. 51, 52: "Eine Fahrlässigkeit des Fleischers resp. Trichinenschauers konnte nicht nachgewiesen werden. Die gerichtliche Untersuchung ergab, dass der Fleischbeschauer sich mitunter die zu untersuchenden Fleischproben durch Lehrlinge, während er dabei war, hatte herauschneiden lassen. Er wurde daraufhin mit 9 Mark Strafe belegt." Fresh pork. *Accordingly the hog was inspected and passed as free from trichinæ.*

Gnesen, R.-B. Bromberg 1 case, 0 death.

Siedamgrotzky, 1896, p. 51: A butcher boy ate some pork before the hog was inspected. He was taken to the hospital, and the hog was found to be trichinous.

Gostyn, R.-B. Posen, February 3 cases, 2 deaths.

Schmidt, 1897, p. 150: The hog was known to be trichinous.

Grätz, R.-B. Posen, April 3 cases, 0 death.

Schmidt, 1897, p. 150: Raw ham.

Grätz, R.-B. Posen 3 cases, 0 death.

Schmidt, 1897, p. 150: Source could not be established. Three prisoners. [The supply of prison food is assuredly known.]

Königsberg (R.-B.) [2 cases, 0 death].

See Memel.

Memel, Kr. Memel, R.-B. Königsberg, December .. 2 cases, 0 death.

Veröff., 1895, p. 133: No details, except date.—Nath, 1897, p. 106: The meat had not been inspected.

Neustadt bei Pinne, and Linde, Kr. Neutomischel, R.-B. Posen,

April 22 cases, 1 death.

Schmidt, 1897, p. 151: *The two hogs were inspected and passed as free from trichinæ.* The inspector, a druggist, was imprisoned four months.—Zeitschr. f. Fleisch- und Milchhyg., 1894, IV (9), June, p. 181: 30 cases.—Idem (10), July, p. 201: *The hog was inspected and passed as free from trichinæ.* Thirty cases, 1 death.—Veröff., 1896, XX (15), p. 289: 22 cases, 1 death. Two hogs.

Opatow, R.-B. Posen, December 7 cases, 1 death.

Schmidt, 1897, p. 151: From so-called "Polish sausage." The meat probably came from Russia. The hog was brought in on foot and not inspected.

Posen (R.-B.) [51 cases, 5 deaths].

Gostyn, 3 (2); Grätz, 3; Neustadt, 22 (1); Opatow, 7 (1); Posen, 3; Punitz, 3 (1); and Santomischel, 7.—Veröff., 1894, records cases as follows: p. 329, 27 cases; p. 314, 5 cases; p. 297, 4 cases; p. 245—Posen and Leipzig, several "Vereinzelte" cases.

Posen (Stadt), R.-B. Posen, June..... 3 cases, 0 death.

Schmidt, 1897, p. 151: No details given regarding inspection, for source of infection could not be established.

Punitz, Kr. Kröben, R.-B. Posen..... 3 cases, 1 death.

Zeitschr. f. Fleisch- und Milchhyg., 1894, IV (8), May, p. 161: The hog was inspected and condemned.—The Veterinarian, 1894, p. 874: After the hog was condemned, it was stolen and eaten (Review from Berl. T. W.).

Putzig, Kr. Filehne, R.-B. Bromberg, April..... 10 cases, 0 death.

Siedamgrotzky, 1896, p. 51: *The hog was inspected and passed as free from trichinæ.* The inspector had examined the hog carefully and for a long time. "Der Fleischbeschauer, ein älterer Mann, hatte das Schweinefleisch nach Aussage von Zeugen lange und genau untersucht und dann für trichinenfrei erklärt."—Zeitschr. f. Fleisch- und Milchhyg., 1894, IV (9), June, p. 181: "Putzig, R.-B. Danzig." *The hog was inspected and passed as free from trichinæ.* Nine cases. Probably Oster-tag referred to R.-B. Bromberg.

Santomischel, Kr. Schroda, R.-B. Posen..... 7 cases, 0 death.

Schmidt, 1897, p. 151: 7 persons in 2 families. The source of the infection could not be established.

1895: 358 cases, 4 deaths.

Summary for the year.—No official sanitary reports for any of the Regierungs-Bezirke are accessible. From other sources (official imperial statistics, etc.) I have collected 358 cases, 4 deaths, of which at least 68 cases, 1 death, were due to meat which was inspected and passed as free from trichinæ; 242 cases, 1 death (Kelbra), were due to carelessness on the part of an inspector (only one of several hogs was inspected); 11 cases, 1 death, were due to meat smuggled away from the inspection. Twenty-one cases of another outbreak may also have been due to meat smuggled away from the inspection. Of the remaining 16 cases, 1 death, 6 occurred in a military kitchen; hence the source of the meat must have been known. One outbreak (3 cases, 1 death) was due to sausage; hence the source of infection was established, although the reports do not state the source of the sausage. In three records (Berlin, 1 case; Posen, 4 cases) no details whatever are given. In not a single case has it even been intimated that the sickness was due to American meats. These cases were confined to the following 8 Regierungs-Bezirke: Berlin, Breslau, Bromberg, Königsberg, Magdeburg, Merseburg, Posen, and Potsdam. The outbreak of 242 cases at Kelbra shows the shadow side of the German inspection system.

Berlin..... 1 case, 0 death.

Veröff., 1895, p. 448: No details.

Breslau (R.-B.) [5 cases, 0 death].

See Guhrau, 5.

Bromberg, (R.-B.) [8 cases, 0 death].

See Gnesen, 8.

Dembin, Kr. Samter.

See Pakoslaw.

Gnesen, R.-B. Bromberg 8 cases, 0 death.

Zeitschr. f. Fleisch- und Milchhyg., 1895, V (9), p. 181: "In Gnesen sind 6 Soldaten des dort garisonierenden 49. Infanterie-Regiments an Trichinosis erkrankt. Sämtliche Patienten waren in die Küche kommandiert und haben geständig von dem eingelieferten rohen Fleische gekostet."—Veröff., 1898, XXII (44), Nov. 2, p. 959: 8 cases. This reference probably belongs here.

Guhrau und Altguhrau, R.-B. Breslau, December . . 5 cases, 0 death.

Veröff., 1896, p. 493: *The hog (slaughtered November 28) was inspected and passed as free from trichinæ.* All cases recovered. The inspector who examined the meat without finding trichinæ, was tried but was acquitted on the ground that in a case of such light infection trichinæ might not be present in the samples which were taken according to regulations. "Der Krankheitsverlauf war bei Allen ein günstiger. Der Fleischbeschauer G., welcher das Schwein untersucht hatte, ohne Trichinen zu finden, wurde in den gegen ihn wegen Fahrlässigkeit eingeleiteten Strafverfahren freigesprochen, weil bei nicht erheblichen Zahl der Trichinen die Möglichkeit nicht ausgeschlossen erschien, dass in den vorschrittmässig entnommenen Proben Trichinen nicht enthalten waren."

Kelbra, Altendorf, etc., R.-B. Merseburg, July . . 242 cases, 1 death.

Veröff., 1895, p. 696: 242 cases, 1 death. Especially Altendorf.—Penkert, 1895, Zeitschr. f. Medizinalbeamte, No. 17.—Zeitschr. f. Fleisch- und Milchhyg., 1895, V (12), September, p. 240: 250 to 300 cases, 1 death.—Idem, 1896, VI (5), p. 91: 242 cases. In the trial of the inspector it was shown that he had examined samples from only one hog, while several hogs were slaughtered. Furthermore, he had not taken this sample himself, as provided for in the regulations, but had taken a sample which was sent to him.—Ostertag, 1899, p. 506: 242 (1). Date given as 1897.

Klein-Quenstedt, Kr. Halberstadt, R.-B. Magdeburg, August

55 cases, 0 death.

Strassner, 1895, p. 503: "In dem gerichtsseitig von mir erforderten Gutachten trat ich für den Fleischbeschauer insofern ein, als ich bei der Erfahrung, dass selbst nach erfolgtem Auffinden von Trichinen trotz sorgfältigster Untersuchung in sehr zahlreichen Präparaten keine weiteren nachzuweisen sind, den Standpunkt von Riess (Trichinenkrankheit) einnahm, wonach die Trichinenschau keinen absolut sicheren Schutz garantirt, da Trichinen, wenn sie nur spärlich vorhanden sind, sogar von den tüchtigsten Schauern übersehen werden können. Diese Auffassung theilen auch andere Autoren (Schmidt-Mühlheim, Verkehr mit Fleisch- und Fleischwaaren, 1887; Jaeger, Schmarotzerkrankheiten; Dammer's Gesundheitspflege).

Der Fleischbeschauer hatte den polizeilichen Vorschriften gemäss die Proben selbst entnommen, und zwar nach seiner Angabe in Haselnussgrösse aus Zwerchfell, Zungenwurzel, Bauch- und Zwischenrippenmuskeln, hatte von jeder Probe 3 Quetschpräparate, jedes zu 30-40 Quadratcentimeter Glasfläche, gemacht und auf die Untersuchung eine Zeit von dreiviertel Stunden verwendet."—Zeitschr. f. Fleisch- und Milchhyg., 1896, VI (5), pp. 91, 92: 55 cases. *The hog was inspected and passed as free from trichinæ.*—Perhaps the same as Idem, 1895, V (12), September, p. 241: 30 cases, 0 death.—Journ. Comp. Path. and Ther., 1896, p. 66.

Königsberg (R.-B.)..... 3 cases, 1 death.

Veröff., 1895, p. 547: 1 death and 3 cases. No details.—*Zeitschr. f. Fleisch und Milchhyg.*, 1895, V (12), September, p. 240: Cervelatwurst. Family, 1 death. "In Königsberg i. Pr. ferner sind die Mitglieder einer Kaufmannsfamilie nach Genuss von Cervelatwurst an Trichinosis erkrankt. Die Frau des Hauses ist bereits gestorben, während ein Diener noch schwer darniederliegt."

Magdeburg (R.-B.)..... [55 cases, 0 death].

See Klein-Quenstedt, 55.

Merseburg (R.-B.)..... [242 cases, 1 death].

See Kelbra.

Nowawes bei Potsdam, R.-B. Potsdam..... 21 cases, 0 death.

Zeitschr. f. Fleisch- und Milchhyg., 1895, VI (3), December, p. 59: "In Nowawes bei Potsdam ist eine Trichinenepidemie ausgebrochen mit 12 leichten und 3 schweren Erkrankungen. Die Erkrankungen folgten auf den Genuss von Blaseschinken, in dessen übrig gebliebenen Resten Trichinen nachgewiesen werden konnten."—Veröff., 1896, XX (4), p. 57: It was not positively determined whether the hog had been smuggled away from the inspection or not. "In Nowawes bei Potsdam sind in den letzten Tage des Oktober und der ersten Hälfte des November 1895 insgesamt 21 Personen an Trichinose erkrankt. Die Erkrankungen verliefen zum Theil unter schweren Erscheinungen, haben aber in keinem Falle einen tödlichen Ausgang genommen. In 17 Fällen wurde festgestellt dass die Erkrankten trichinenhaltigen Schinken gegessen hatten, der von einem bestimmten Flesicher gekauft war, jedoch wurde bisher noch nicht sicher ermittelt, ob das Schwein, von welchem der Schinken herrührte, der Trichinenschau entzogen worden war."

Opatow-Lenka, Kr. Kempen, R.-B. Posen..... 8 cases, 1 death.

Zeitschr. f. Fleisch- und Milchhyg., 1895, V (5), Feb., p. 101: 5 cases.—Idem, (6), March, p. 122: 8 cases, 1 death. *The hog was evidently inspected and passed as free from trichinae*, for the inspector was discharged. "Die Trichinosis in Opatow, bei welcher 8 Personen lebensgefährlich erkrankt sind—ein Patient ist bereits gestorben—hat zur Entlassung der Trichinenschau. zu Boleslawice und Wilhelmsbrück (Podsamtche) geführt. Ausserdem sollen die weiteren schweren Uebelstände der Grenzfleischschau beseitigt werden."

Pakoslaw, Kr. Neutomischel, R.-B. Posen, December, 1895–January, 1896..... 11 cases, 1 death.

Veröff., 1896, XX (47), p. 887: Hog slaughtered December 19, 1895, and smuggled away from the inspection. One patient died January 26, 1896, in Pakoslaw. Parents, 8 brothers and sisters in Dembin, Kr. Samter, became sick, 3 of these very sick. "Das Schwein war der Trichinenschau entzogen worden." Shepherd's family.

Posen (R.-B.)..... [23 cases, 2 deaths].

See Opatow, 8 (1); Pakoslaw, 11 (1); and Posen, 4.

— **R.-B. Posen**..... 4 cases, 0 death.

Veröff., 1895, p. 335: 2 cases.—Idem, May, p. 351: 2 cases.

Potsdam (R.-B.)..... [21 cases, 0 death].

See Nowawes, 21.

1896: 74 cases, 6 deaths.

Summary for the year.—No official district reports are accessible for this year. As nearly as can be estimated at present, 74 cases, 6 deaths, occurred. Of these, 32 cases appear to have been due to meat which was inspected and passed as free from trichinæ; 8 further cases were due to meat which either was inspected or should have been; 2 cases were due to meat which was condemned and buried, but afterwards dug up and eaten; 7 cases, 1 death, appear to have been due to known sources of infection, but no details are given regarding the inspection; 22 cases, 4 deaths, were due to meat which is stated not to have been inspected; the remaining 3 cases, 1 death, as yet lack details. Not a single case has been attributed to American pork.

Angerburg, R.-B. Gumbinnen 4 cases, 1 death.

Zeitschr. f. Fleisch- und Milchhyg., 1896, VI (8), May, p. 161: "In Angerburg ist ein Grundbesitzer nach dem Genusse trichinösen Schweinefleisches gestorben, drei weitere Personen liegen schwerkrank darnieder."

Bartenstein, Kr. Friedlang, R.-B. Königsberg 3 cases, 0 death.

Zeitschr. f. Fleisch- und Milchhyg., 1896, VI (8), May, p. 161: Meat not inspected. "Bei Bartenstein erkrankten endlich mehrere Personen nach einer Schmauserei an Trichinosis. Das trichinöse Fleisch war nicht untersucht worden."

Dembina (Gut), Kr. Samter, R.-B. Posen [10 cases, 0 death].

Zeitschr. f. Fleisch- und Milchhyg., 1896, VI (5), pp. 101, 102: Meat came from a hog which was smuggled away from the trichina inspection ("welches der Trichinenschau hinterzogen worden war"). Shepherd's family. Probably the same as Pakoslaw, 1895-1896.

Erfurt (R.-B.) [27 cases, 0 death].

See Treffurt, 27.

Görlitz [R.-B. Liegnitz ?] 3 cases, 0 death.

Zeitschr. f. Fleisch- und Milchhyg., 1896 (8), May, p. 161: Hog was slaughtered outside, and when brought to town was not inspected. "Die Fälle infolge Umgehung oder nachlässiger Ausübung der Trichinenschau häufen sich in bedauerlichem Masse. Neuerdings erkrankten mehrere Personen in Görlitz nach Genuss von Schweinefleisch, welches sich bei der Nachuntersuchung als stark trichinös erwies. Das schädliche Fleisch stammte von einem ausserhalb Görlitz geschlachteten Schwein und war bei der Einfuhr nach Görlitz nicht untersucht worden."

Gumbinnen (R.-B.) [20 cases, 5 deaths].

See Angerburg, 4 (1); Kl.-Stimort, 4 (1); and Schönbund, 12 (3).

Kl.-Cyste bei Culm, Kr. Kulm, R.-B. Marienwerder

8 cases, 0 death.

Zeitschr. f. Fleisch- und Milchhyg., 1896, VI (7), April, p. 141: 6 hogs killed; only 2 inspected. "Trichinosis ist nach der 'Allgem. Fleisch. Zeitg.' zu Klein-Cyste im Kreise Kulm ausgebrochen. Ein Besitzer K. hatte von 6 Schweinen, die er geschlachtet, nur zwei untersuchen lassen und, da diese trichinenfrei befunden wurden, einen grossen Theil sämtlicher Tiere zu Wurst verarbeiten lassen. Nach dem Genuss der Wurst sind acht Personen, darunter K. selbst, sehr schwer an Trichinosis erkrankt. Das noch vorhandene Fleisch sowie die Wurst sind amtlich vernichtet worden."

Kl.-Cyste bei Culm, R.-B. Marienwerder 3 cases, 1 death.

Zeitschr. f. Fleisch- und Milchhyg., 1896, VI (9), June, p. 181: "In Klein-Cyste bei Culm sind 3 Personen an Trichinosis erkrankt. Eine derselben ist der Krankheit erlegen."

Kl.-Stimort, Kr. Angerburg, R.-B. Gumbinnen, May

4 cases, 1 death.

Zeitschr. f. Fleisch- und Milchhyg., 1896, VI (10), July, p. 205: Hog not inspected, but afterwards found trichinous. "In der Familie des Instmanns Aug. Puschke in Kl. Stimort, Kr. Angerburg, wurde das rohe, zubereitete Fleisch eines geschlachteten, auf Trichinen nicht untersuchten Schweines genossen. Es erkrankten darauf der Mann, die Frau und die beiden jüngsten Kinder an Trichinose. Die Frau ist am 15. Mai gestorben, der Mann und die beiden jüngsten Kinder sind z. Z. noch schwer erkrankt. Die beiden ältesten Kinder hatten nur gekochtes Fleisch genossen und blieben gesund. Das Fleisch des geschlachteten Schweines ist nachträglich untersucht und stark mit Trichinen durchsetzt gefunden worden."

Königsberg (R.-B.) [3 cases, 0 death].

See Bartenstein, 3.

Lissa (Landgericht) i. Pr., R.-B. Posen 2 cases, 0 death.

Veröff., 1899, p. 320*: On December 31, 1895, Se. slaughtered a hog. S. afterwards found the meat trichinous. Before this the butcher K., the assistants Sp. and C., and servant Wo., ate of meat. Hog's carcass was buried; Wo. dug it up the same day, ate some of the meat and gave a ham to Mak.; the latter gave some meat to R., stating that it was trichinous; also ate some himself and gave some to his child; R. gave some of the meat to J. R., who ate it without cooking it, and gave some to her child. Both J. R. and her child were taken sick.

Liegnitz (R.-B.) [3 cases, 0 death].

See Görlitz, 3.

Marienwerder (R.-B.) [14 cases, 1 death].

See Kl.-Cyste, 3 (1), 8; and T. and W. b. Thorn, 3.—Veröff., 1896, XX (11), March, p. 201: No details; 6 cases.

Neutomischel, R.-B. Posen 5 cases, 0 death.

Zeitschr. f. Fleisch- und Milchhyg., 1896, VI (7), April, p. 142: *Meat had been inspected and passed as free from trichinae.* "In Neutomischel erkrankten nach derselben Quelle [Allg. Fl. Z.] 5 Personen nach dem Genuss geräucherter Fleisches und geräucherter Wurst an Trichinosis. Die in dem Fleische bei der Nachuntersuchung festgestellten Trichinen sind von dem zuständigen Trichinenschauer übersehen worden."

Pakoslaw, Kr. Neutomischel, R.-B. Posen [11 cases, 1 death].

See 1895.

Posen (R.-B.) [7 cases, 0 death].

See [Dembina, 10]; Lissa, 2; Neutomischel, 5; [Pakoslaw, 11 (1)]; and [Posen, 5].

Posen (R.-B.) [5 cases, 0 death].

Veröff., 1896, XX (18), March, p. 217: No details given. Probably refers to Neutomischel.

Schönbund, Kr. Angerburg, R.-B. Gumbinnen .. 12 cases, 3 deaths.

Zeitschr. f. Fleisch- und Milchhyg., 1896, VI (9), June, p. 181: Hog slaughtered at home and not inspected. "Im Dorfe Schönbund, Kreis Angerburg, O. Pr., ist eine Trichinenepidemie ausgebrochen, welcher bereits 3 Personen zum Opfer

gefallen sind, während 2 weitere noch sehr schwer darniederliegen. Im ganzen erkrankten 12 Personen. Die Erkrankungen folgten auf den Genuss von Rauchwurst, welche aus dem Fleisch eines hausgeschlachteten und deshalb nicht untersuchten Schweines hergestellt worden war. Diese traurige Erfahrung stellt die Unzulänglichkeit der fakultativen Trichinenschau ins rechte Licht und heischt gebieterisch die Einführung der allgemeinen obligatorischen Untersuchung der Schweine auf Trichinen, zumal da es sich bereits um die 4. Trichinenepidemie im Kreise Angerburg handelt."

Treffurt bei Urfurt, Kr. Mühlhausen, R.-B. Erfurt, January -

27 cases, 0 death.

Veröff., 1896, p. 257: December, 1895-January, 1896; more than 27 cases, 0 death. "In Treffurt, Kreis Mühlhausen, erkrankten im December 1895 und Januar 1896 zahlreiche Personen, von denen 27 in ärztliche Behandlung traten, nach dem Genuss von Theils roh als Hackfleisch, theils schwach angebraten als Bratwurst zubereitetem Schweinefleisch. Unter den Erkrankten befand sich der Eigenthümer des Schweines, von dem das Fleisch herrührte. Es wurde festgestellt, dass die nach dem Schlachten des Schweines ordnungsgemäss herbeigeführte Trichinenschau von dem Fleischbeschauer R. mit grosser Nachlässigkeit vorgenommen war; R. hatte nicht die vorgeschriebenen 8, sondern nur 4, vielleicht sogar nur 2 Fleischproben entnommen und nach der Untersuchung das Schwein für trichinenfrei erklärt. Dagegen wurden später von einem anderen Fleischbeschauer und dem Kreisphysikus in Fleischtheilen von dem verdächtigen Schweine Trichinen gefunden. Infolgedessen ist der Fleischbeschauer R. seines Amtes enthoben und zur strafrechtlichen Verantwortung gezogen worden. Die Erkrankten sind inzwischen sämmtlich wieder genesen."—Zeitschr. f. Fleisch- und Milchhyg., 1896, VI (5), 8, p. 101: 18 cases. Hog slaughtered by a "private man." *Inspected and passed as free from trichinae.*

T. and W., Landgericht Thorn, R.-B. Marienwerder-----

3 cases, 0 death.

Veröff., 1899, XXIII, p. 319:* December, 1895, workman L. slaughtered a hog for his sick father in Wi.; W. in Wi. aided him; W. cut the meat and gave pieces to L., who sold some; the father of L. took the money; "several" persons were taken sick with trichinosis; meat was afterwards inspected and found heavily infested; L. was imprisoned a week.

1897: 141 cases, 6 deaths.

Summary for the year.—None of the official Bezirk health reports is accessible. As nearly as can be figured out from present reports, about 141 cases, 6 deaths, occurred. These figures may need correction after fuller details are published. Of the 141 cases, 6 deaths, 101 cases, 2 deaths, appear to have been due to meat which was inspected, at least stamped as free from trichinae; 3 cases were due to meat which had been condemned and buried, but was dug up and eaten; 25 cases, 2 deaths, were due to meat which is definitely stated not to have been inspected (source was known); 5 cases, 2 deaths, were due to meat the source of which was known, but no details are given regarding inspection; regarding the remaining 7 cases, no details are as yet accessible to me. Not a single case is attributed to American pork.

“Reformbedürftigkeit der Trichinenschau.—In letzter Zeit haben sich in bedenklicher Weise Fälle von Trichinosis gehäuft, welche nach dem Genusse angeblich untersuchten Fleisches auftraten. Diese Vorkommnisse, durch welche frühere lediglich bestätigt werden, erfordern dringend eine Reform des heutigen Trichinenschauwesens. Dieselbe hat zu bestehen: 1, in der allgemeinen Vorschrift, dass nur die Trichinen-Lieblingssitze erster Ordnung zur Probeentnahme verwendet und dass die Untersuchung der Proben in ganz bestimmt vorgeschriebener, zweckmässiger Weise ausgeführt wird. 2, in der Anordnung einer regelmässigen Kontrolle und periodischer Lehrversammlungen für die ländlichen Trichinenschauer nach dem Vorgange in Coburg-Gotha (Georges). In den Versammlungen würden die Trichinenschauer fortgebildet und stets wieder von neuem auf die hohe Verantwortlichkeit ihres Berufes aufmerksam gemacht werden. ~

“Trichinenepidemie, welche sich in den letzten Wochen ereigneten, werden gemeldet aus Bromberg, Wohlau und Leubus. In letzterem Dorfe hat der Sohn des Trichinenschauers unbefugter Weise die Untersuchung des schädlichen Fleisches ausgeführt und die in demselben enthaltenen Trichinen übersehen.”—Zeitschr. f. Fleisch- und Milchhyg., 1897, VIII (6), March, pp. 125, 126.

Altthorn, R.-B. Marienwerder 10 ? cases, 0 ? death.

Zeitschr. f. Fleisch- und Milchhyg., 1897, VII (5), February, p. 104: Hog not examined. “In Altthorn erkrankten die Theilnehmer an einem Schlachtfeste nach dem Genuss von Wellfleisch und frischer Wurst. Das Fleisch des Schweines war leichtfertiger Weise nicht auf Trichinen untersucht worden. Die nachträgliche Untersuchung ergab die Anwesenheit zahlreicher Trichinen.” Number of cases not given.

Breslau (R.-B.) [9 cases, 0 death].

See Greblin, 6; Leubus, 3.

Bromberg (R.-B. or Stadt?) 3 ? cases, 0 death.

Zeitschr. f. Fleisch- und Milchhyg., 1897, VII (6), March, p. 126: An epidemic. Number of cases not given. No details.

Frankfurt a. M., R.-B. Wiesbaden 1 case, 0 death.

Veröff., 1897, XXI (48), 1 December, p. 973: In hospital. No details.

Görlitz [R.-B. (?) Liegnitz?] 1 case, 0 death.

Zeitschr. f. Fleisch- und Milchhyg., 1897, IV (5), February, p. 104: Hog was inspected and passed as free from trichinae, or at least it was so stamped. “In Görlitz erkrankte eine Köchin nach dem Genuss von Schweinefleisch an schwerer Trichinosis. Die angestellten Ermittlungen ergaben, dass das Schwein, von welchem das Fleisch stammte, den Stempel über eine in Löschnitz angeblich erfolgte Untersuchung trug. Diese Untersuchung kann aber, wenn sie überhaupt stattfand, nur leichtfertig ausgeführt worden sein; denn bei der Nachuntersuchung des Fleisches liessen sich Trichinen leicht ermitteln.”

Greblin bei Militsch, R.-B. Breslau, January 6 cases, 0 death.

Zeitschr. f. Fleisch- und Milchhyg., 1897, VII (5), February, p. 104: Hog inspected and passed as free from trichinae. “In Greblin b. Militsch liegt ein Freisteller mit 5 Kindern darnieder. Der Freisteller hatte am 20. December 1896 ein Schwein geschlachtet, welches vom Trichinenschauer als trichinenfrei bezeichnet wurde. Die Familie ass bis zum 4. Januar nur gekochtes Fleisch und blieb daher ohne nachtheilige Folgen; dagegen stellten sich am 8. Januar heftige Erkrankungen ein, nach dem der Freisteller mit seinen Kindern von dem geräucherten Fleisch gegessen hatte.”

Königsberg (R.-B.) 20 cases, 4 deaths.

See Koschlau, 15 (2); Soldau, 5 (2).

Koschlau and Abbau, Kr. Niedenberg (R.-B. Königsberg?), August, . . .
 15 cases, 2 deaths.

Veröff., 1898, XXII (13), 30 March, p. 265: Hog not inspected. "Am 21. August 1897 wurde von dem prakt. Arzte P. auf dem Bahnhofe zu Koschlau bei 5 Personen eine schwere und bei 7 Personen eine leichte Erkrankung an Trichinose konstatiert. Tags vorher war der Fleischer T. in Abbau Meischlitz, Kreis Neidenburg, anscheinend an Ruhr gestorben und ein Sohn desselben erkrankt. Durch weitere ärztliche Untersuchung wurde festgestellt dass auch die bei T. vorgekommenen Erkrankungsfälle auf Trichinose zurückzuführen seien. Der Fleischer T. hatte ca. 14 Tage vorher ein Schwein geschlachtet, welches stark mit Trichinen behaftet war, und das Fleisch ohne vorherige Untersuchung an Bewohner von Abbau-Meischlitz und den Bahnhofsrestaurateur K. in Koschlau verkauft, der dasselbe zu Cervelatwurst verarbeitete. Infolge Genusses dieses trichinenhaltigen Fleisches bezw. der Wurst sind im Ganzen 15 Erkrankungsfälle an Trichinose eingetreten, wovon diejenigen des Fleischers T. und eines bei dem Bahnhofsrestaurateur K. bediensteten Mädchens tödlichen Ausgang hatten."—*Zeitschr. f. Fleisch- und Milchhyg.*, 1898, VIII (9), June, pp. 178, 179.

Leubus, Kr. Wohlau, R.-B. Breslau 3? cases, 0 death.

Zeitschr. f. Fleisch- und Milchhyg., 1897, VII (6), p. 126: Number of cases not given. *Hog inspected and passed as free from trichinæ* by son of inspector. * * * "Hat der Sohn des Trichinenschauers unbefugter Weise die Untersuchung des schädlichen Fleisches ausgeführt und die in demselben enthaltenen Trichinen übersehen."

Liegnitz (R.-B.) [1 case, 0 death].

See Görlitz, 1.

Magdeburg (R.-B.) [3 cases, 0 death].

See Reesdorf.

Marienwerder (R.-B.) [98 cases, 2 deaths].

See Althorn, 10; Mocker, 73 (2); Thorn, 15.

Mocker and Thorn, R.-B. Marienwerder, February–March . . .

73 cases, 2 deaths.

Veröff., 1897, XXX (29), July 21, p. 589: "In Mocker bei Thorn, sowie in Thorn selbst erkrankten im Februar und März 1897 zahlreiche Personen, welche Schweinefleischwaaren aus einem Schlachtergeschäft in Mocker bezogen und genossen hatten; ausserdem ereignete sich 1 Einzelfall in Dresden, welcher auf den Genuss von Wurst gleicher Herkunft zurückzuführen war. Im Ganzen sind 74 Fälle bekannt geworden, darunter 55 in Mocker und 18 in Thorn, doch ist die Zahl der thatsächlich Erkrankten wahrscheinlich grösser gewesen. Gestorben ist ein Schlachterlehrling, der vermutlich eine grössere Menge rohes Wurstfleisch zu sich genommen hatte und eine andere Person in Mocker. Von den 74 Erkrankungen waren 36 Einzelfälle und 38 Gruppenerkrankungen, davon 32 in 13 Familien und 6 in einer Thorner Speisewirtschaft. In dem nach Feststellung der Krankheit ungesäumt beschlagnahmten Fleischvorräthen des betr. Schlachters wurden lebende Trichinen gefunden, ebenso in den Muskeln des verstorbenen Lehrlings. Der vorläufig seines Amtes enthobene Fleischbeschauer und der Besitzer des Schlachtergeschäftes sind zur strafrechtlichen Verantwortung gezogen worden. Die von Seiten der Behörden angestellten Nachforschung nach der Herkunft des (oder der) trichinösen Schweines haben zu keinem sichern Ergebniss geführt; wahrscheinlich war dasselbe aus dem Kreise Briesen bezogen worden."—*Zeitschr. f. Fleisch-*

und Milchhyg., 1897, VII (7), April, p. 145: 40 cases. *The hog was inspected and passed as free from trichinae.* "Dem Vernehmen nach soll grobe Fahrlässigkeit des Trichinenschauers die Schuld an dem bedauernswerten Vorfall tragen."—Idem (11), p. 225.

Oppeln (R.-B.) [3 cases, 0 death].
See Wohlau, 3.

Posen (R.-B.) [3 cases, 0 death].
See Zegrze, 3.

Reesdorf [= Deesdorf? R.-B. Magdeburg] 3 cases, 0 death.
Zeitschr. f. Fleisch- und Milchhyg., 1898, VIII (4), January, p. 80: *Meat said to have been inspected and passed as free from trichinae.* "In Reesdorf erkrankte die aus drei Köpfen bestehende Familie eines Gastwirts nach dem Genuße angeblich untersuchten Schweinefleisches an Trichinosis. Bei der Nachuntersuchung der Fleischreste wurden zahlreiche Trichinen festgestellt." Reesdorf could not be found. Could this refer to Deesdorf, R.-B. Magdeburg?

Soldau, Kr. Neidenburg, R.-B. Königsberg
More than 5 cases, 2 deaths.

Zeitschr. f. Fleisch- und Milchhyg., 1897, VII (12), September, p. 245: Source known. Not definitely stated whether the meat had been inspected. "In Soldau i. Ostpr. erkrankte die aus 5 Personen bestehende Familie des Fleischers T. plötzlich an Trichinosis. T. ist am 3. Tage gestorben. Ausserdem sollen ein zweiter Todesfall und weitere Erkrankungen in anderen Familien eingetreten sein. Von T. verkaufte Wurst wurde bei der Nachuntersuchung stark trichinenhaltig gefunden."

Thorn, R.-B. Marienwerder 15 cases, 0 death.
Zeitschr. f. Fleisch- und Milchhyg., 1897, VII (6), April, p. 126: *Meat inspected and passed as free from trichinae.* "Von der Strafkammer zu Thorn ist der Trichinenschauer V. wegen fahrlässiger Körperverletzung zu 2 Monaten Gefängniß verurtheilt worden. V. hatte das Fleisch eines stark trichinösen Schweines, nach dessen Genuss 15 Personen erkrankten, für trichinenfrei erklärt." The bibliographic references would indicate that this is not the same outbreak as Mocker-Thorn.

Wiesbaden (R.-B.) [1 case, 0 death].
See Frankfurt 1.

Wohlau (Dorf and Kreis), R.-B. Oppeln 3? cases, 0 death.
Zeitschr. f. Fleisch- und Milchhyg., 1897, VII (6), March, p. 126: No details as to number of cases or source of infection are given. "An epidemic."

Zegrze, R.-B. Posen 3 cases, 0 death.
Zeitschr. f. Fleisch- und Milchhyg., 1897, VII (5), February, p. 104: Hog was condemned and buried; was afterwards dug up by the owner and eaten. A "family." "Nach der Allg. Fleisch.-Ztg., ist in Zegrze in Posen eine Familie an Trichinosis erkrankt. Die Veranlassung war der Genuss des Fleisches von einem trichinösen Schwein, welches von der Behörde vergraben, vom Besitzer aber wieder ausgegraben worden ist."

1898: 44 cases, 0 death.

Summary for the year.—No district health reports are accessible. As nearly as can be estimated from the data at hand, about 44 cases, 0 death, occurred. It appears also that 37 of these cases were due to

meat which had passed inspection as free from trichinæ; regarding 2 cases, no details are given; regarding the remaining 5 cases, no details are given, and their occurrence appears to be somewhat in doubt.

Altona, R.-B. Schleswig-Holstein -----

Veröff., 1899, XXIII (23), 7 June, p. 466: Altona hospital; 2 cases.—Idem (24), 14 June, p. 490: Report corrected. "Die auf S. 466 enthaltene Mittheilung, nach welcher in Altona (Krankenhaus) 2 Erkrankungen an Trichinose vorgekommen sind, beruht, wie sich nachträglich herausgestellt hat, auf einer irrthümlichen Angabe in der betreffenden Krankenhaus-Nachweise."

Hannover (Stadt or R.-B.?) ----- 3 cases, 0 death.

Veröff., 1898, XXII (25), 22 June, p. 501: No details. Referring to these cases, it may be remarked that 3 Hannover officials stated to me in 1899 that no cases of trichinosis had occurred in Hannover in 1898. Two of them stated that, if this reference in Veröff. referred to the city of Hannover, some mistake must have occurred, as they would surely have known of any cases reported.

Königsberg (R.-B.) ----- [4 cases, 0 death].

See Mohrungen, 3; Wilmsdorf, 1.

Kulm, R.-B. Marienwerder ----- 34 cases, 0 death.

Veröff., 1898, XXII (30), July 27, p. 597: 8 cases.—Idem (28), July 13, p. 565: 14 cases.—Idem (29), July 20, p. 581: 12 cases.—Allg. Fl. Ztg., 1898 (56), July 14, p. 2: 34 cases.—Sudd. Fl. Z., XV (29), July 17, p. 3; 50 cases.—Der Trichinenschauer, 1898, X (14), July 15, p. 109: * * * "Wie Fleischermeister Kobs erklärt, ist das Schwein von dem das Fleisch Herrührte, im Schlachthause geschlachtet und untersucht worden." Fifty cases.—Veröff., 1898, XXII (38), July, p. 790: "Vom 28. Juni bis 6. Juli d. J. erkrankten in rascher Aufeinanderfolge 33 Personen in der Stadt Kulm und die Wirthschafterin eines etwa 10 Km. entfernten Gutes. Bei einem 19 jährigen Arbeiter, welchem am 26. Juni eine Quetschwunde im Gesicht beigebracht worden war, vermochte der Kreisphysikus am 5. Juli in einem linsengrossen, der Wunde entnommenen Muskelstückchen 3 Trichinen nachzuweisen. Von den 34 Erkrankungen betrafen 13 Männer, 20 Frauen oder erwachsene Mädchen, 1 einen 12 jährigen Knaben; 12 waren Einzelfälle, die übrigen 22 Gruppenerkrankungen, die in 5 Familien und in der Arbeiterschaft (8 Fälle) einer Reifenfabrik vorkamen. Sämmtliche Erkrankte sind genesen. Alle hatten im letzten Drittel des Juni Schweinefleisch in verschiedener Form, als Warschauer Wurst, Bratwurst, Klopsfleisch, Hackfleisch, Karbonade, aus dem Geschäft des Fleischers K. genossen, welches höchst wahrscheinlich von einem Schweine stammte, das am 21. Juni in dem städtischen Schlachthause zu Kulm geschlachtet worden war. Es konnte durch die eingeleitete Untersuchung nicht festgestellt werden, welcher der 3 Trichinenschauer das Schwein am 21. Juni untersucht und als gesund erklärt hatte." Thus it appears that the hog was inspected and passed as free from trichinæ.

Marienwerder (R.-B.) ----- [34 cases, 0 death].

See Kulm.

Mohrungen, R.-B. Königsberg ----- 3 ? cases, 0 death.

Der Trichinenschauer, 1898, X (14), July 15, p. 110: Hog said to have been inspected. "Mehrere Erkrankungen, die auf Trichinosis schliessen lassen, sind hier festgestellt worden, ebenso ein Fall in dem benachbarten Wilmsdorf. Das trichinöse Fleisch soll von zwei hiesigen Fleischermeistern in Verkehr gebracht worden sein, das von einem im hiesigen Schlachthause untersuchten Thiere stammt."—Nach der

Erkrankung waren davon noch einige Fleischtheile vorhanden, die nach genauer Untersuchung trichinenfrei befunden worden sind.—Die Untersuchung ist eingeleitet.—Zeitschr. f. Fleisch- und Milchhyg., 1898, VIII (10), July, p. 198: Number of cases not given. Mentions only Mohrunge.

Posen (R.-B.) 2 cases, 0 death.

Veröff., 1898, XXII (50), December 14, p. 1093: 2 cases. No details.—Der Trichinenschauer, 1899, IV (1), January, p. 7.

Stettin (Stadt or R.-B.?) 1 case, 0 death.

Veröff., 1898, XXII (41), October 12, p. 881: No details. In connection with this case it may be mentioned that, according to a statement by the Stettin Polizeipraesidium in 1899, no cases of trichinosis have been officially known in Stettin for a number of years. "Hierorts sind schon seit einer Reihe von Jahren Fälle von Erkrankungen an Trichinosis amtlich nicht bekannt geworden."

Wilmsdorf, R.-B. Königsberg 1 case, 0 death.

Der Trichinenschauer, 1898, X (14), July 15, p. 110: *Hog inspected and passed as free from trichinae.* See Mohrunge.

1899.

Summary for the year.—Owing to the order mentioned on page 21, it is necessary for me to reject all Prussian sanitary records since 1899. A serious consideration of Prussian sanitary statistics following this official suppression of information would be a travesty on public hygiene. The following cases of trichinosis have been collected, and will be cited here in order to make the series of years complete, but they will be rejected in toto from the summaries.

It may here be remarked that a short time before the order in question was issued a certain Prussian official, when arguing the subject of trichinosis, informed me that *since I had brought into discussion the local statistics, "which Prussia had published in all good faith," it would perhaps be necessary to suppress these more complete reports in the future.*

Berlin 1 case, 0 death.

Veröff., 1899, XXIII (43), October 25, p. 922: Hospital. No details.

Hannover (Stadt or R.-B.?) 1 case, 0 death.

Veröff., 1899, XXIII (25), June 21, p. 506: Hospital. No details.—See remarks under Hannover, 1898.

Königsdorf bei Mohrunge, R.-B. Königsberg, January ----

4 cases, 1 death.

Der Fleischbeschauer, 1899, IV (3), March 1, p. 36: "Nach dem Genusse von trichinösem Schweinefleisch ist in Königsdorf bei Mohrunge ein Tischler verstorben; seine Frau und zwei Söhne liegen noch schwer krank darnieder. Das Schwein von dem das Fleisch stammte *war bei der Untersuchung für trichinenfrei erklärt worden*; der Rest des Schweines ist jetzt hier nochmals untersucht und stark trichinös befunden worden."—Deutsche Fleisch-Ztg., 1899, June 17: "Die hiesige [Braunsberg] Strafkammer verurtheilte den Fleischbeschauer Lehwald aus Königsdorf wegen fahrlässiger Tödtung zu 15 Monaten Gefängniß. Der Angeklagte hatte Schweine des Tischlers Werner auf Trichinen untersucht und sie für

Trichinenfrei erklärt, während sie thatsächlich stark trichinenhaltig waren. Nach dem Genuss des Fleisches erkrankten Werner, seine Frau und zwei Söhne an Trichinose; Werner starb.”—Central-Fl.-Ztg., 1899, June 17: “Wegen fahrlässiger Körperverletzung und Tödtung hatte sich kürzlich der Besitzer und Fleischbeschauer Friedrich Lehwald aus Königsdorf, Kreis Mohrungen, vor der hiesigen Strafkammer zu verantworten. Der Vorgang ist folgender: ‘Im Dezember v. J. hatte Lehwald von dem Tischlermeister Werner aus Königsdorf von einem von diesem geschlachteten Schweine einzelne Stücke Fleisch entnommen, um sie im Auftrage des Werner auf Trichinen zu untersuchen. Beide hatten, wie der angeklagte angiebt, abgemacht, dass er dem Werner den Ausfall der Untersuchung nicht mittheilen sollte, wenn das Fleisch nicht trichinenhaltig sei. Lehwald will bei der Untersuchung in der That keine Trichinen gefunden haben, und da er dem Werner keine Mittheilung machte, wurde von diesem und seiner Familie das Schweinefleisch gegessen. Bald nach dem Genuss erkrankten sämtliche Familienmitglieder, und der Tischlermeister Werner selbst starb in der Nacht zum 25. Januar d. J. Die Section hat ergeben, dass er an Trichinosis zu Grunde gegangen ist. Die Schuld an seinem Tode und der Erkrankung der übrigen Familienmitglieder trägt der Angeklagte, welcher nachlässiger Weise das Schweinefleisch offenbar überhaupt nicht untersucht hat. Bald darauf wurde das Fleisch von einem anderen Fleischbeschauer und auch durch den Kreisthierarzt untersucht und Trichinen in grosser Menge gefunden, so dass der Angeklagte bei Anwendung auch nur der geringsten Aufmerksamkeit das Vorhandensein der Trichinen hätte erkennen müssen. Auch in den von der Leiche entnommenen Fleischtheilen haben ärztliche Sachverständige Trichinen gefunden und dadurch zweifellos festgestellt, dass die Trichinen durch den Genuss des Schweinefleisches auf den Werner übertragen wurden. Der Angeklagte wurde zu einer Gefängnisstrafe von einem Jahr und drei Monaten verurtheilt.’”—Idem, June 21: “Die Strafkammer verurtheilte den Fleischbeschauer Lehwald aus Königsdorf, der durch nachlässige Untersuchung des Schweinefleisches die Erkrankung der Tischlerfamilie Werner und den Tod des Tischlers Werner in Folge Trichinosis verursachte, wegen fahrlässiger Tödtung und Körperverletzung zu 1 Jahr 3 Monaten Gefängniss.”—Der Fleischbeschauer, IV (7), July 1: “Uebersehens von Trichinen. Der Fleischbeschauer Lehwald in Königsdorf bei Braunsberg hatte einige Tage vor Weihnachten 1898 ein Schwein des Tischlers W. zu untersuchen, wobei er Trichinen nicht gefunden haben will. Er hat aber auch das Schwein in bedeutendem Grade trichinös abgestempelt, vielmehr mit dem W. vereinbart wenn er nicht wiederkäme sei alles in Ordnung. Anfangs Januar brach in der Familie W. nun Trichinose aus, woran W. am 25. Januar starb. Sowohl die Leichensektion wie die Untersuchung des noch vorhandenen Fleisches ergab das Vorhandensein von Trichinen. Nach dem Gutachten des Kreisthierarztes hätte L. bei nur geringer Aufmerksamkeit die Trichinen finden müssen, da das Schwein in bedeutendem Grade trichinös war. Der Gerichtshof verurtheilte ihn zu einem Jahr drei Monaten Gefängniss.”—Zeitschr. f. Fleisch- und Milchhyg., 1899, IX (8), May, p. 159: 4 cases, 1 death, in Königsberg. Home-slaughtered hog. Possibly this reference belongs here.

Magdeburg (R.-B.) Magdeburg..... 1 case, 0 death.

Veröff., 1899, XXIII (24), June 14, p. 490: In hospital. No details.

Magdeburg (R.-B.) Magdeburg..... 3 cases, 0 death.

Veröff., 1899, XXIII (39), September 27, p. 813: In hospital. No details.

Marienwerder (R.-B.)..... 3 cases, 0 death.

Veröff., 1899, XXIII (32), August 9, p. 653: No details.

Marienwerder (R.-B.)..... 2 cases, 0 death.

Veröff., 1899, XXIII (33), August 16, p. 681: No details.

Melno, Kr. Graudenz [R.-B. Marienwerder?] 1 case, 0 death.

Der Fleischbeschauer, 1899, IV (9), September 1, p. 116: "Der Sohn des Waldwärters D. aus Melno, der bei dem Fleischermeister P. in Podrzewie Prov. Posen das Fleischerhandwerk erlernt, besuchte seinen Vater und erkrankte sogleich. * * * Der Arzt stellte Erkrankung an Trichinosis fest. Der Erkrankte erzählt, er habe bei seinem Meister Bratwurst gemacht und dabei rohes Schweinefleisch gegessen."

Mittenwalde [R.-B. Bromberg, or Potsdam, or Breslau ?]

11 cases, 1 death.

Zeitschr. f. Fleisch- und Milchhyg., 1899, X (3), p. 60: "In Mittenwalde in Schlesien ist eine Trichinenepidemie ausgebrochen, der bereits eine Person zum Opfer gefallen ist."

Mittelwalde [11 cases, 0 death].

Der Fleischbeschauer, 1899, IV (12), December 1, p. 150: "Keine Trichinosis in Mittelwalde. Wie uns von zuständiger Seite mitgeteilt wird, sind in Mittelwalde i. Schles. zwar 11 Personen an einer der Trichinose ähnlichen Krankheit erkrankt gewesen, doch haben bei den von der verstorbenen Fleischermeisters-Ehefrau Fichtner entnommenen Fleischstückchen Trichinen nicht festgestellt werden können. Hiernach hat es sich wohl um eine der Trichinose ähnliche Krankheit gehandelt, aber nicht um Trichinose selbst."

PRUSSIAN CASES (1881-1898) ARRANGED BY REGIERUNGS-BEZIRKE.

In order to determine the geographic distribution of the outbreaks in Prussia, the cases are here arranged according to Regierungs-Bezirke, and in order to judge whether the entire absence of the disease in certain districts or the absence in certain other districts during given years may be attributed exclusively to the microscopic inspection, quotations are made from official reports relative to the efficiency of the inspectors, condition of their instruments, etc.

It should be borne in mind that the individual ideas of the present writer are not involved in these quotations. On the contrary, this is a compilation of European—chiefly German—evidence.

It will be noticed that no cases have been gathered for the years in question for the following nine districts: Aachen, Aurich, Coblenz, Lüneburg, Minden, Osnabrück, Sigmaringen, Stade, and Trier. The other districts may be arranged, with reference to their number of cases and deaths, as follows: Münster (1), Hannover (3), Wiesbaden (3), Stralsund (4, 1), Stettin (18), Danzig (20, 3), Schleswig-Holstein (24, 1), Oppeln (25), Coeslin (46), Liegnitz (65, 8), Arnberg (69, 1), Düsseldorf (84, 3), Berlin (87, 10), Gumbinnen (103, 8), Breslau (108, 14), Hildesheim (112, 4), Erfurt (121, 1), Cologne (127), Frankfurt a. O. (137, 14), Cassel (150, 2), Potsdam (158, 1), Posen (219, 21), Bromberg (269, 5), Königsberg (313, 33), Marienwerder (333, 15), Magdeburg (572, 16), Merseburg (651, 14).

Aachen 0 case, 0 death.

No official sanitary reports are accessible for the years 1881, 1882, 1895-1898, and no cases have been found recorded for the Bezirk for

the years 1880–1898. Trost (1883, pp. 42, 43; 1887, pp. 49, 56) states that no cases have ever been known in the district.

This freedom from the disease can not, however, be attributed to the microscopic inspection; in fact, the consensus of opinion in this district has been against the introduction of the system, as seen from the following extracts from official sanitary reports:

“Die Einführung der obligatorischen Trichinenschau ist wiederholt Gegenstand der eingehendsten Erörterungen der Königlichen Regierung gewesen. Im Jahre 1875 wurde die Frage der Einführung der obligatorischen Untersuchung des Schweinefleisches auf Trichinen sämmtlichen Landrätthen des Bezirks zur gutachtlichen Aeusserung vorgelegt und haben dieselben sich ohne Ausnahme dagegen erklärt. Im Jahre 1879 war die allgemeine Fleischbeschau wiederum Gegenstand sorgfältiger Berathung der Königlichen Regierung. Auch jetzt wurde von der obligatorischen Fleischuntersuchung Abstand genommen, weil die Gründe welche früher für die Nichteinführung derselben massgebend waren, noch heute fortbestehen. Es ist im hiesigen Bezirke noch kein Fall von Trichinose vorgekommen. Geeignete Personen für die Untersuchung, namentlich in der Eifel wie überhaupt in den ländlichen Ortschaften sind nicht vorhanden und wohl kaum zu bekommen. Eine mangelhafte Untersuchung schadet mehr als sie nutzt. * * * Das Schweinefleisch wird im hiesigen Bezirke fast ausschliesslich im gekochten Zustande genossen.”—Trost, 1883, pp. 42, 43.

Four years later Trost (1887, pp. 49, 56) states that no cases of trichinosis have ever been known in this Regierungs-Bezirk, and that the introduction of the obligatory inspection for hogs slaughtered here has not been found necessary. Referring to the subject again, after another four years, Trost (1891, p. 106) remarks as follows:

“Wie in den vorigen, so ist auch in diesen drei Berichtsjahren bei der Königlichen Regierung die Einführung der obligatorischen mikroskopischen Untersuchung des Schweinefleisches auf das Vorhandensein von Trichinen wiederholt Gegenstand eingehendster Erörterungen gewesen, obgleich sich ein Bedürfniss für die Einführung derselben im diessseitigen Bezirke nie geltend gemacht hat.

“Sämmtliche Landräthe des Bezirks halten eine Nothwendigkeit der Einführung jener Untersuchung nicht für vorhanden und bezweifeln, wenn auch nicht Zweckmässigkeit, so doch ihre Ausführbarkeit.

“Auf dem flachen Lande und in der Eifel erfolgt nämlich das Schlachten der Schweine hauptsächlich nur in den beiden Wintermonaten Januar und Februar, während in den übrigen Monaten des Jahres nur ganz ausnahmsweise stattfindet. Eine *sorgfältige* mikroskopische Untersuchung, welche doch nur allein Schutz gegen Trichinose bieten würde, ist, da es in Anbetracht des eben erwähnten Umstandes auf dem Lande an einer zur Vornahme solcher Untersuchung genügenden Anzahl qualificirter Persönlichkeiten mangelt, nicht ausführbar. Müssten jedoch trotzdem die Untersuchung vorgenommen werden, so würde dies naturgemäss nur in höchst oberflächlicher Weise geschehen können; eine solche Untersuchung bietet aber durchaus keine Sicherheit gegen die Gefahr der Trichinose. * * * Ausserdem wird, was unzweifelhaft die grösste Sicherheit gegen die Gefahr der Trichinose bildet, im hiesigen Bezirke fast ohne Ausnahme das Schweinefleisch nur gekocht resp. stark gebraten verzehrt. Gegen rohes und selbst gegen nicht ganz durchgebratenes also immerhin noch rohes Fleisch besteht in allen Schichten der Bevölkerung ein grosser Widerwillen.”

It would appear that the opposition to the introduction of the microscopic inspection has, in part at least, been overcome, for regulations

authorizing the inspection were issued on August 27, 1897, and February 25, 1898.

Arnsberg 69 cases, 1 death.

Official records for the years 1892–1898 are not accessible. No cases were found for the years 1882 (Schönfeld; 1884) 1883, 1884 (Katerbau, 1888, p. 121); 1886–1888 (Tenholt, 1891, p. 86); 1889, 1890 (Tenholt, 1894, p. 97); 1892–1898. The following records have been found:

1881, 24 cases, 1 death. All due to inspected meat.

1885, 5 cases, 0 death. The hog had been inspected.

1891, 40 cases, 0 death. The hog was certified as inspected, but doubts have been raised as to whether it was really examined.

Of these 69 cases it will be noticed that at least 29 were caused by inspected meat, while 40 more were caused by meat which was officially certified as inspected. No cases have been attributed to American meats.

“Altena erfreut sich eines öffentlichen Schlachthauses; gleichwohl lehrt der Fall, dass auch in solchen, in erster Linie für die öffentliche Sicherheit errichteten Anstalten die grobsten Versehen vorkommen können, wenn die Vorschriften zwar vorhanden sind, aber die Ausführung derselben nicht gehörig überwacht wird.

“Der Schlachthaus-Inspector, ein approbirter Thierarzt, der zugleich die Untersuchung der Schweine auf Trichinen und Finnen in ganz bestimmt vorgeschriebener Weise vorzunehmen hatte, hat das Schwein, von welchem die Infection nachweislich ausgegangen ist, höchst wahrscheinlich gar nicht untersucht. Es waren an dem betreffenden Tage ausserordentlich viele, etwa zwanzig Schweine im Schlachthause geschlachtet worden. Die hierdurch bedingte reichliche Arbeit in Verbindung mit dem Umstande, dass unter den westfälischen Schweinen nur äusserst selten bisher Trichinen entdeckt worden sind, mag den Fleischbeschauer zu der Unterlassungsünde verleitet haben.

“Die ersten Krankheitsfälle erkannte Herr Dr. vom Hofe; derselbe stellte die Diagnose durch den Nachweis der Trichinen in den von ihm aus der Muskulatur eines seiner Patienten entnommenen Fleischtheilchen fest. Zufolge dessen wurden noch an demselben Tage die noch vorhandenen trichinösen Speckseiten und Schinken, sowie weiterhin ermittelt, dass das betreffende, etwa 14 Tage vorher im Schlachthause geschlachtete Schwein, unter der amtlichen Beglaubigung, dass es untersucht und trichinenfrei befunden sei, dem Verkehr überlassen worden war. Es ist, wie gesagt, höchstwahrscheinlich gar nicht untersucht worden, denn bei der nachträglichen Untersuchung fand sich das Fleisch der vorerwähnten Stücke derartig übersäet mit Trichinen, dass dieselben unmöglich hätten übersehen werden können, zumal sich auch ergab, dass das Mikroskop und die sonstigen Geräthschaften des Fleischbeschauers, wie auch seine persönlichen Fertigkeiten nichts zu wünschen übrig liessen.”—*Tenholt, 1894, p. 97.*

Aurich 0 case, 0 death.

Official sanitary reports for 1881, 1882, and 1895–1898 are not accessible; and no cases of trichinosis have been found for the years 1881–1898. Rapmund (1887, p. 142) states that no cases were observed during the years 1883, 1884, and 1885; or (1890, p. 88) 1886, 1887, and 1888. Qüttel (1894, p. 43) gives no cases under Zoonosen for 1889, 1890, and 1891; or (1896, p. 90) 1892, 1893, and 1894.

A statement made by Qüttel (1894, pp. 90, 91) is interesting and important. It leads one to suspect that Aurich does not owe its

immunity entirely to the trichina inspection. He says that of a total of 49,413 hogs inspected during the years 1889-1891, not a single animal was found to be trichinous. To many persons this statement may mean that none of the swine slaughtered in Aurich were infected, but other persons may find it difficult to accept this explanation.

Berlin 87 cases, 10 deaths.

No local official sanitary reports are accessible to me for the years 1895-1898. As is shown elsewhere, the reports for the years 1881-1894 do not agree in all details, but, as nearly as I have been able to gather, no cases are reported for the years 1886 (Pistor, 1890, p. 169); 1892, 1894, 1896-1898. The cases collected for the other years are:

1881, 21 cases, 2 deaths. Five cases due to inspected meat; 8 cases given without details; source not traced, 3 cases; source known, no details given regarding inspection, 5 cases, 1 death.

1882, 3 cases, 0 death. May have been due to inspected meat, but this is doubtful.

1883, 6 cases, 1 death. Source of infection not given (4) or not known (2).

1884, 10 cases, 1 death. Source not given for 8 cases, 1 death; 2 cases due to meat from Potsdam; details regarding inspection not given.

1885, 15 cases, 1 death. Twelve cases, 1 death, due to inspected meats; no details, 3 cases.

1887, 7 cases, 1 death. Five cases, 1 death, due to uninspected meat from Neu-Kulm-See; details regarding other cases not given.

1888, 5 cases, 3 deaths. Details not given; possibly 1 case, 1 death, repeated from 1887.

1889, 8 cases, 1 death. Said to be due to meat sent in from outside; several (3 ?) cases due to inspected meat; details of other cases not given.

1890, 1 case, 0 death. Source of infection not given.

1891, 1 case, 0 death. Source of infection not given.

1893, 9 cases, 0 death. Said to be due to meat sent in from outside; details regarding inspection not given.

1895, 1 case, 0 death. Source of infection not stated.

[1898, 2 cases, 0 death; source known; other cases; reference obtained after manuscript was completed, hence these cases are not included in summaries.]

[1899, 1 case, 0 death. Source of infection not stated.]

Omitting the year 1899 (see p. 97), it is thus seen that a total of 87 cases, 10 deaths, are reported. None of these appear to have been due to meat *officially* inspected in Berlin; 5 cases appear to have been due to meat *unofficially* inspected in Berlin; and 15 cases, 1 death (possibly 18 cases, 1 death), appear to have been due to meat inspected elsewhere. The details regarding a number of cases, both before 1892 and since that date, are incomplete. At any rate, not a single case has been attributed to American meats; in fact, I have found only 1 case (1895) recorded since 1893.

It is interesting to note that probably the most rabid attacks made upon American pork issue from a certain daily paper published in Berlin, yet 55 cases occurred in this city, or an average of $6\frac{1}{2}$ cases per year, during the years (1883-1891) of the prohibition, while only 10 cases (an average of $1\frac{1}{2}$ cases per year) have been recorded for the

period 1892–1898, during which American pork has been imported under certificate. During the nine years when American pork was excluded, 8 deaths occurred; during the seven years of importation under certificate, not a single death appears to have been reported. Thus it is difficult to see how American pork has been so dangerous as alleged for the Berlin public.

It is interesting to note that the Berlin police authorities have felt it necessary to warn people against relying too implicitly upon the German inspection, as shown in the following:

Prussia.—Berlin.—Warning against eating raw pork.¹

As experience has shown, the general public does not sufficiently take cognizance of the fact that even when a well-organized and reliable local inspection of all slaughtered swine exists, nevertheless, pork which has not been examined at all or has been superficially examined comes on the market and is a source of great danger to life and health; this uninspected or poorly inspected pork comes in part from places in which inspection is carried on, yet is not required for all hogs, in part from places where no inspection is carried on, and in part is due to an evasion of the existing laws.

Warning is therefore given against the use as food of all raw pork, and it is further brought to the notice of the public that a thorough cooking of the meat, as well as of all pork products (meat, blood-liver sausages, dumplings, pickled pork, etc.), will kill any trichinæ which are present, and thus exclude all danger of infection. In order to bring about a thorough cooking of larger pieces, it is necessary to make deep incisions in the meat, about 8 cm. (4 inches) apart, so that the necessary degree of heat (lit. boiling heat) can penetrate to the deepest layers.

(Signed)

FREIHERR V. RICHTHOVEN (*President*), *Chief of Police*.

BERLIN, March 20, 1889.

¹[Original.]

Preussen.—Berlin.—Warnung vor dem Genuss von rohem Schweinefleisch.

Wie die Erfahrung mehrfach erwiesen hat, beherzigt das Publikum die Thatsache immer noch nicht genügend, dass selbst dann, wenn eine gut organisirte und zuverlässige Fleischschau am Wohnort für alle geschlachteten Schweine besteht, doch theils aus Orten, in welchen die Fleischschau zwar eingeführt aber nicht für alle geschlachteten Schweine vorgeschrieben ist, theils aus Orten ohne jede Fleischschau, theils endlich mit Umgehung der bestehenden Bestimmungen, gar nicht oder mangelhaft untersuchtes Schweinefleisch in den Verkehr gelangen und grosse Gefahren für Leben und Gesundheit der Konsumenten herbeiführen kann.

Es wird daher vor dem Genuss jeglichen rohen Schweinefleisches ernstlich gewarnt und ferner darauf hingewiesen, dass lediglich ein vollkommenes Garkochen (Durchbraten) der Fleischstücke, wie sämmtlicher Zubereitungen aus Schweinefleisch (Fleisch, Blut-Leberwürste, Klösse, Sülzen, etc.) im Stande ist, die etwa vorhandenen Trichinen zu tödten und dadurch jede Gefahr einer Gesundheitsschädigung auszuschliessen. Um das Garkochen, Durchbraten grösserer, dicker Stücke (Schinken, Genickbraten, etc.) zu ermöglichen, ist es nothwendig, tiefe, etwa 8 cm. von einander entfernte Einschnitte in die betreffenden Stücke zu machen, damit auf diesem Wege die Siedhitze auch auf die tiefst gelegenen Fleischschichten hinreichend einwirken vermag.

Berlin, den 20. März 1889.

Der Polizei-Präsident.

(Gez.)

FREIHERR VON RICHTHOVEN.

Breslau 108 cases, 14 deaths.

No official reports are accessible for the years 1881, 1883, 1895-1898. No cases have been collected for the years 1881, 1883, 1890, 1891, 1893, 1894, 1896, 1898. The following cases have been compiled:

1882, 7 cases, 1 death. One case, 1 death, due to inspected meat; 6 cases to uninspected meat.

1884, 4 cases, 1 death. One case, 1 death, due to condemned meat; 3 cases to "imported [from where?] meat."

1885, 23 cases, 4 deaths. Sixteen cases, 3 deaths, due to inspected meat; 3 other cases may have been due to inspected meats; 4 cases, 1 death, to uninspected meat.

1886, 20 cases, 1 death. Seven cases, 1 death, due to uninspected meat; details not complete for other 13 cases; source of 3 cases known.

1887, 19 cases, 1 death. Seventeen cases, 1 death, due to inspected meat; 2 cases due to meat eaten before inspection.

1888, 4 cases, 0 death. Due to sausage made before meat was inspected.

1889, 14 cases, 6 deaths. Due to condemned meat.

1892, 3 cases, 0 death. Apparently due to inspected meat.

1895, 5 cases, 0 death. Due to inspected meat.

1897, 9 cases, 0 death. All due to inspected meat.

Thus, of 108 cases, 14 deaths, collected for 1881-1898, 84 cases, 13 deaths, are reported for the nine years when American pork was excluded; the 7 cases reported for 1882 are accounted for; of the remaining 17 cases, 0 death (reported since 1891), 14 cases appear to have been due to inspected meats. The details of 3 cases are lacking, but no one seems to have ever suggested that they were due to American meat. In view of these statistics it is somewhat difficult to see that American pork has been responsible for any cases of trichinosis in this *Regierungs-Bezirk*. Wolff (1890, p. 39), in discussing the inspection, remarks:

Bei den periodischen, von den Kreismedicinalbeamten ausgeführten Revisionen, der von den Fleischbeschauern bei Ausübung ihres Berufs gebrauchten Mikroskope ist die Erfahrung gemacht worden, dass in nicht seltenen Fällen die Mikroskope der Fleischbeschauer schadhaft und von schlechter Beschaffenheit waren.

With this official testimony that a number of microscopes were out of order and of poor construction, we must either conclude that Breslau does not owe its comparative freedom from trichinosis entirely to the microscopic inspection, or that the Breslau inspectors are so keen sighted that they can easily detect trichinæ with poor microscopes. As to the probability of the latter explanation, the reader is referred to the above statistics.

Even when meat is known to be trichinous there seems to be some fatality in Breslau about its not being safeguarded in such a way as not to cause trichinosis, for 14 cases, 6 deaths, were due to condemned meat, which, had it been properly cooked or cured, could have been safely eaten.

Bromberg 269 cases, 5 deaths.

Official *Bezirk* sanitary reports are not accessible for the years 1895-1897. No cases found recorded for the years 1873-1882 (Strahler,

1883); 1889 (Peters, 1893, pp. 47-49); 1893 (Siedamgrotzky, 1896, pp. 51, 52); 1896, 1898. The following cases have been collected:

1883, 20 cases, 2 deaths. Meat was inspected and known to be trichinous, but was made into sausage.

1884, 11 cases, 0 death. Eight cases due to inspected meat; 3 cases to uninspected meat.

1885, 90 cases, 0 death. Traced to two butchers who were in the habit of smuggling meat away from the inspection.

1886, 1 case, 0 death. Meat eaten before hog was inspected.

1887, 45 cases, 1 death. It is possible that the meat was not inspected; may have been smuggled. See p. 68.

1888, 36 cases, 2 deaths. Two cases, 1 death, due to condemned meat; 25 cases to meat which is supposed to have been smuggled away from the inspection; 6 cases, 1 death, to uninspected meat; source of 3 cases not determined.

1890, 23 cases, 0 death. Three cases due to inspected meat; 11 cases to pork imported from Russia; source of 2 cases not traced; details regarding inspection for 7 cases not given.

1891, 1 case, 0 death. Meat not inspected.

1892, 12 cases, 0 death. All due to inspected meats.

1894, 19 cases, 0 death. Eighteen cases due to inspected meat; 1 case due to meat eaten before it was inspected.

1895, 8 cases, 0 death. Traced to official rations, hence source determined; details regarding inspection not given.

1897, 3 cases, 0 death. Source of infection not given.

It will be seen that R.-B. Bromberg has not a very enviable history so far as its outbreaks of trichinosis are concerned. In a total of 269 cases, 5 deaths, 227 cases, 5 deaths, occurred during the years 1883-1891, and 42 cases, 0 death, during the years 1892-1898. Of the total 269 cases, 5 deaths, 41 cases were due to inspected meat; 70 cases, 1 death, supposed to be due to meat which was smuggled away from the inspection; 90 cases due to meat sold by butchers who were in the habit of smuggling meat away from the inspection; 22 cases, 3 deaths, due to inspected meat known to be trichinous; 3 cases due to meat eaten before it was inspected; 10 cases, 1 death, due to meat which was not inspected; 11 cases due to meat imported from Russia, details regarding inspection not given; source of 15 cases known, but details regarding inspection not given; source not traced in 5 cases; source not given in 3 cases. Thus all cases are accounted for except 8; 5 of these occurred during the exclusion of American meats. For the 3 cases in 1897 no details are given.

Not a single one of the 40 cases during 1892-1898 has been alleged to be due to American meats.

The trichina inspection was instituted by an order dated January 4, 1875. Strahler (1883, pp. 70, 71) calls attention to the higher percentage of trichinosis among the hogs in the Kreisen Wongrowitz, Gnesen, Mogilno, and Inowrazlaw, and says that prior to the introduction of the microscopic inspection trichinosis in man was frequently observed in these places, especially in Wongrowitz. Peters (1890, p. 59) states

that it has not been possible to introduce the inspection in all the country places:

“Im hiesigen Bezirk besteht bis jetzt noch nicht die üble Gewohnheit, Schweinefleisch im rohen Zustande zu geniessen, daher ist trotz der ausserordentlichen Verbeitung der Trichinen unter den Schweinen die Häufigkeit der Erkrankungen beim Menschen keine sehr grosse, obwohl die obligatorische Untersuchung des Schweinefleisches in den ländlichen Ortschaften noch nicht überall eingeführt werden konnte.”—*Peters, 1890, p. 59.*

From the above discussion it is not clear that the inspection alone has resulted in entirely protecting this district from trichinosis.

Cassel 150 cases, 2 deaths.

No official health reports are accessible for the years 1895–1898. No cases of trichinosis appear to be recorded for the years 1883, 1885 (Rockwitz, 1888, p. 35); 1887 (Rockwitz, 1892, p. 62); 1889–1894 (Weiss, 1894, p. 99; 1896, p. 108); 1895–1898. The following statistics have been collected:

1881, 49 cases, 0 death. Forty-one cases due to inspected meats; source of 8 cases not known.

1882, 35 cases, 0 death. Eighteen cases due to inspected meats; 17 due to uninspected meats.

1884, 51 cases, 0 death. All apparently due to inspected meats.

1886, 12 cases, 2 deaths. All apparently due to inspected meats.

1888, 3 cases, 0 death. All apparently due to inspected meats.

Thus, of a total of 150 cases, 2 deaths, 84 cases occurred before American pork was excluded, 59 of which were due to inspected meat, 17 to uninspected meat, while the source of infection in 8 cases is not stated. During the exclusion of American pork 66 cases, 2 deaths, occurred, all of which appear to have been due to inspected meats. Since the readmission of American pork no cases appear to have been reported. Rockwitz (1888, p. 236) refers to the “Mängel der Trichinenschau [und] Unzuverlässigkeit der Beschauer.”

Coblenz 0 case, 0 death.

Official sanitary reports for the years 1881, 1882, and 1895–1898, are not accessible, but no cases of trichinosis for these years were found in the official statistics of the Imperial health office. No cases were found in the official sanitary reports of the R.-B. Coblenz for the years 1883–1894 (Massenbach, 1887, p. 61; 1890, p. 68; 1893; and Wehmer, 1897.) Under these circumstances it can hardly be alleged that the attacks on American pork by the German press find any support in the sanitary history of Coblenz. Wehmer (1897, p. 57) remarks: “Uebrigens schweben inzwischen Verhandlungen wegen Wieder-Einführung einer allgemeinen Trichinen- und Finnenschau für den ganzen Regierungsbezirk.” As no general and universal inspection system has existed in the district, it can hardly be claimed that Coblenz owes its immunity from trichinosis to the microscopic inspection; and, as no cases of trichinosis are reported, it can hardly be

maintained that American pork has spread this disease among the inhabitants of R.-B. Coblenz.

Coeslin 46 cases, 0 death.

No local official sanitary reports are accessible for the years 1895–1898. No cases appear to be reported for the years 1881 (Massenbach, 1883, p. 39); 1882 (Massenbach, 1884); 1884 (Wernich, 1887, p. 163); 1886, 1888 (Wernich, 1890, p. 99); 1889–1891 (Roth, 1893, p. 88); 1892–1894 (Grisar, 1896, p. 116); 1895–1898. The only cases found were:

1883, 1 case, 0 death. Meat apparently not inspected.

1885, 3 cases, 0 death. Sausage eaten before meat was inspected.

1887, 42 cases, 0 death. All apparently due to meat which had either been inspected, or had been smuggled away from the inspection.

Thus 48 cases, 0 death, are reported for the years 1883–1891, while no cases have been found for the years 1892–1898. Grisar (1896, p. 116) remarks:

“Die mikroskopische Fleischschau ist nunmehr in sämtlichen 23 Städten während der Berichtszeit (1892–94) eingeführt worden. Für das platte Land ist diese Massregel, von vereinzelt grösseren Ortschaften abgesehen, wo die mikroskopische Fleischschau privatim ausgeübt wird, bisher nicht gehandhabt worden.”

Grisar also states that some American pork is brought in through Russia, a statement I find it difficult to interpret, since Russia does not import American pork.

Cologne [Köln] 127 cases, 0 death.

No official district health reports are accessible for the years 1895–1898. No cases appear to be reported for the years 1884, 1885 (Schwartz, 1887); 1886–1888 (Schwartz, 1893, p. 35); 1889–1891 (Schwartz, 1893, p. 35); 1892–1894 (Weyhöfer, 1897). The only cases found for the period 1881–1898 are:

1881, 3 cases, 0 death. Ham from Westphalia; details regarding inspection not given.

1882, 89 cases, 0 death. Due to condemned meat.

1883, 35 cases, 0 death. Due to inspected meat.

Besides these 127 cases, 0 death, none of which have ever been alleged to be due to American meat, there is a reference to 1 case (by Bouley, 1884, p. 395) for 1883, which he attributes to American pork. As is shown on p. 173, this may possibly refer to a cat. (See also p. 178.)

There are but few parts of Prussia where more severe attacks appear upon American pork than in the R.-B. Cologne. The Cologne statistics, however, would give rise to the suspicion that these attacks are not based entirely upon purely sanitary motives.

Danzig 20 cases, 3 deaths.

No official local health reports are accessible for the years 1881–1882, 1889–1891, 1895–1898. No cases appear to be recorded for the

years 1881-1882; 1883-1885 (Zeuschner, 1887); 1888 (Zeuschner, 1891, p. 50); 1889-1891; 1893-1894 (Borntraeger, 1897, p. 160); 1895-1898. The only cases found are:

1886, 2 cases, 2 deaths. From sausage; details regarding inspection not given.

1887, 10 cases, 0 death. Due to inspected meat.

1892, 8 cases, 1 death. Source known; details regarding previous inspection not given.

Thus, of the 20 cases, 3 deaths, collected, 12 cases, 2 deaths, occurred while American pork was excluded, and the 8 cases, 1 death, which have occurred since the readmission of American pork are known to have been due to German meat. The health statistics of R.-B. Danzig do not, therefore, appear to support the anti-American attacks of the agrarians.

Düsseldorf 84 cases, 3 deaths.

Official reports are not accessible for the years 1882, 1895-1898. No cases appear to be recorded for the years 1882-1883; 1884 (Weiss, 1888, p. 95); 1887-1888 (Weiss, 1890, pp. 70, 152); 1892-1894 (Michelsen, 1897); 1895-1898. The following statistics have been gathered:

[1877-1880, 171 cases, ? deaths. Details not all accessible. See Weiss, 1890, p. 152.]

1881, 16 cases, 3 deaths. Alleged, by the German Government, to be due to American pork, see p. —.

1885, 3 cases, 0 death. Details not given.

1886, 5 cases, 0 death. Hog probably not inspected.

1889, 20 cases, 0 death. Details not given. (See remarks p. 75.)

1890, 20 cases, 0 death. Details not given. (See remarks p. 75.)

1891, 20 cases, 0 death. Details not given. (See remarks p. 75.)

Thus in a total of 84 cases, 3 deaths, one outbreak (16 cases, 3 deaths) in 1881 is alleged, by the German Government, to have been due to American pork; 68 cases are reported for the period during which American pork was excluded, and no cases have been reported since its readmission. The entire cost (Weiss, 1890, p. 152), at the rate of 1 mark per hog, for a general inspection of pork for R.-B. Düsseldorf would be 396,000 marks; at the ratio of trichinous hogs found during the inspection (5:96,000), the finding of each hog would cost about 19,000 marks. If this estimate were extended to entire Germany, the cost of the inspection would be 13,000,000 marks per year.

Erfurt 121 cases, 1 death.

Official local health reports are not accessible for the years 1895-1898. No cases appear to be recorded for the years 1884-1885 (Richter, 1888, p. 114); 1886, 1888 (Pippow, 1892, p. 114); 1889-1891 (Pippow, 1894, p. 64); 1892-1894 (Pippow, 1897, p. 82); 1895; 1897-1898. The following statistics have been gathered:

1881, 58 cases, 0 death. Fifty cases due to inspected meat; details regarding 8 cases are lacking in my notes.

1882, 15 cases, 1 death. Ten cases, 1 death, due to inspected meat; source of 5 cases not definitely established.

1883, 9 cases, 0 death. ' Due to meat eaten before hog was inspected.

1887, 12 cases, 0 death. Apparently due to inspected meats.

1896, 27 cases, 0 death. Due to inspected meat.

Thus in a total of 121 cases, 1 death, 99 cases, 1 death, appear to have been due to inspected meat; 9 cases due to meat eaten before inspection; source of 5 cases is apparently not established; details are lacking in my notes regarding 8 cases. No cases are alleged to have been due to American meats.

"Von den Fleischbeschauern gelangt jährlich der 3. Theil zur Nachprüfung durch die Kreisphysiker; die Nichtbestandenen wurden zu einer Wiederholung derselben veranlasst, welcher sich einzelne durch Niederlegung des Amtes entzogen. Mit der Nachprüfung war eine Revision der Mikroskope verbunden. Der Erfolg sprach für die Zweckmässigkeit dieser Massregel. Wennschon die Mehrzahl der Berschauer auf einen guten Zustand ihres Mikroskopes hielt, so fiel es doch auf, wie gering die Anforderungen sind, welche einzelne derselben an die Leistungsfähigkeit ihrer Instrumenten stellten."—*Pippov, 1894.*

Frankfurt a. O. 137 cases, 14 deaths.

Official local health reports are not accessible for the years 1882, 1895–1898. No cases appear to be reported for the years 1882–1883 (Wiebecke, 1888, p. 36); 1886–1888 (Frankfurt a. O., 1890, p. 39); 1891 (Wiebecke, 1893, p. 70); 1893–1894 (Frankfurt, 1896, p. 68); 1895–1898. The following records have been collected:

1881, 21 cases, 2 deaths. Regarding 18 cases, 2 deaths, my notes contain no details; source of other cases known, but no details given regarding inspection.

1884, 2 cases, 0 death. *Possibly* only 1 case; meat not inspected.

1885, 82 cases, 11 deaths. Three cases probably due to inspected meat; 48 cases, 8 deaths, to uninspected meats; no details in my notes regarding 19 cases, 1 death; for 2 cases, 2 deaths, it is not stated whether or not the meat was inspected; source of 10 cases not known.

1889, 8 cases, 0 death. Due to inspected meat.

1890, 20 cases, 0 death. Details not given.

1892, 4 cases, 1 death. Apparently due to inspected meat.

Thus of 137 cases, 14 deaths, it would appear that 50 cases, 8 deaths, were due to uninspected meat; 5 cases, 2 deaths, due to infection, the source of which was known, but no details are given regarding the inspection; 15 cases, 1 death, due to inspected meats; source was not traced in 10 cases; regarding 57 cases, 3 deaths, my notes contain no data.

The only cases which have been reported since the reintroduction of American meats are accounted for as being due to inspected pork and it is not even alleged that this was of American origin.

"Der Kreistag des Kreises Züllichau liess sämtliche Fleischbeschauer seit dem Mai 1892 durch den Physikus nachprüfen. Mangelhafte Beschaffenheit, selbst Unbrauchbarkeit der Mikroskope, der Präparations-Utensilien; Unkenntniss der gesetzlichen Bestimmungen, lückenhafte Kenntnisse und selbst mitunter mangelnde technische Fertigkeit haben mannigfache Abhelfe erfordert und die Zuverlässigkeit einzelner Fleischbeschauer in Frage gestellt. Die Nachprüfungen boten zugleich Gelegenheit zur Einführung des Compressoriums an Stelle der bisher verwendeten Objectgläser.

Die Instrumente der Fleischbeschauer im Kreise Soldin wurden im Jahre 1892 einer Revision unterzogen; 30 von 49 Mikroskopen erwiesen sich als mangelhaft resp. schlecht, da sie theils trübe Linsen, theils kein Compressorium, einen zu kleinen Tisch, zu kleine Objectgläser, keine mikrometer Schraube u. s. w. hatten, sowie zu ihrer Handhabung zu viel Zeit und Aufmerksamkeit beanspruchten. * * * Ebenso fand die Nachprüfung der Fleischbeschauer im Kreise Königsberg statt, in Folge dessen einzelne ihr Amt niederlegten, andere die Prüfung wiederholen mussten. Ausserdem mussten die Mikroskope theils reparirt, theils neu beschafft werden."—*Frankfurt a. M., 1896, p. 88.*

Gumbinnen 103 cases, 8 deaths.

Official district sanitary reports are not accessible for the years 1895–1898. No cases have been found for the years 1885 (Passauer, 1887, p. 142); 1886, 1887 (Passauer, 1890, p. 106); 1889, 1891 (Passauer, 1893, pp. 111, 115); 1892, 1893, 1894 (Passauer, 1896, p. 149); 1895, 1897, 1898. The following cases have been collected:

1881, 11 cases, 0 death. Three cases due to meat eaten before inspection; my notes give no details regarding the other 8 cases.

1882, 24 cases, 2 deaths. Six cases due to uninspected meat; source of 3 cases known; details regarding inspection not given; no details regarding 15 cases, 2 deaths.

1883, 10 cases, 0 deaths. Suspected, but not proved, that meat was inspected; source known.

1884, 13 cases, 0 death. No details given for 12 cases; no data known for 1 case.

1888, 14 cases, 1 death. Due to uninspected meat.

1890, 11 cases, 0 death. Eight cases from inspected meat; 3 cases due to uninspected meat.

1896, 20 cases, 5 deaths. Sixteen cases, 4 deaths, due to uninspected meats; source of other outbreaks (4 cases, 1 death) apparently known, but details regarding inspection not given.

Thus, of 103 cases, 8 deaths, 3 cases were due to meat eaten before inspection; 39 cases, 5 deaths, were due to uninspected meat; the source of 7 cases, 1 death, was traced, but no details are given regarding inspection; 10 cases were due to meat which was suspected to have passed the inspection; 8 cases were due to inspected meat; my notes contain no details regarding 35 cases, 2 deaths; regarding 1 case nothing is known. All the cases since 1892 are accounted for and not one of them attributed to American meat. Passauer (1896, p. 191) gives the following details regarding the inspection in this district. (Cf. also remarks, p. 78, on Kr. Johannisburg, 1890):

“Ferner ist festgestellt, dass vielfach Defraudationen bei der Trichinenschau insofern vorgekommen sind, als nicht auf Trichinen untersuchtes Fleisch auf Grund von Bescheinigungen, welche über untersuchtes Fleisch ausgestellt waren, in den Handel gebracht ist. Es ist deshalb in Frage gekommen, ob es sich empfiehlt, sämmtliche auf Trichinen untersuchte Schweine mit einem Farbenstempel an verschiedenen Stellen versehen zu lassen. Endlich ist thatsächlich erwiesen, dass eine Menge von Fleischwaaren, welche in grösserer oder kleinerer Quantität von Russland her über die Grenze gebracht wird, bisher gänzlich ohne Kontrolle bezüglich der Untersuchung auf Trichinen geblieben ist. Auch dieser Uebelstand harret noch einer durchgreifenden Abhilfe. Inzwischen ist die ganze Frage in ein weiteres Stadium dadurch getreten, dass von Neuem die allgemeine obligatorische Fleischschau auf

Trichinen und gleichzeitig die allgemeine Fleischbeschau, d. h. die Untersuchung sämtlicher Schlachtthiere, deren Fleisch zur menschlichen Nahrung bestimmt ist, vor und nach der Schlachtung angeregt worden ist. Das vorliegende Projekt ist einereingehenden Erörterung unterzogen worden und sind umfangreiche Erhebungen über die Durchführbarkeit desselben im Gange. Ein weiterer Bericht über den Ausgang dieser Angelegenheit bleibt für den nächsten General-Medizinalbericht vorbehalten."

With this official testimony before us, showing the fraudulent use of certificates for uninspected meats, it is difficult to assume that Gumbinnen owes its freedom from trichinosis in recent years entirely to the microscopic inspection. It is also difficult to see in the Gumbinnen health statistics any support for anti-American attacks.

Hannover..... 3 cases, 0 death.

No official health reports are accessible for the years 1881, 1882, and 1895-1898; but no cases of trichinosis for this Regierungs-Bezirk during these years (except 1898) were found in the official statistics of the Imperial health office. No cases of trichinosis were found in the official health reports for the years 1883-1894 (Becker, 1887, 1891, 1894, and 1897). The only cases found were:

1898, 3 cases, 0 death. Details not given; the occurrence of these cases is questioned in Hannover.

[1899, 0 cases, 0 death. Details not given.]

Hannover forms an excellent example of conditions which might at first sight be misinterpreted. The fact that no cases of trichinosis have occurred in this Regierungs-Bezirk for so many years has been quoted as "proof" of the efficiency of the inspection system, but a glance at the following extracts from Becker's official reports will lead the reader to be somewhat reserved in regard to the "proof." It will be noticed that Becker states in 1891, 1894, and again in 1897, that a number of trichinæ inspectors in the country were found to be unfit for this work, and that many of the microscopes were so dirty that they were practically useless.

"Die regelmässigen Nachprüfungen der Fleischbeschauer durch die Kreisphysiker haben auch in den Berichtsjahren die Nothwendigkeit einer solchen Massregel deutlich erkennen lassen; sowohl das theoretische Wissen über die Entwicklungsgeschichte, 2c., der Trichinen als auch das practische Auffinden derselben erwies sich in manchen Fällen als mangelhaft, und in recht vielen Fällen waren die Mikroskope so verstaubt und verschmutzt, dass deutliche Bilder mit denselben überhaupt nicht zu [p. 113] gewinnen waren. Wo Wissen und Können sich als völlig unzureichend erwies, wurden die Betreffenden aus ihrem Amte entfernt, in andern Fällen ihnen aufgegeben, durch Theilnahme an einem neuen Unterrichtskurse die verloren gegangenen Kenntnisse sich wieder zu erwerben und sich nach einigen Wochen einer abermaligen Prüfung vor dem Kreisphysicus zu unterziehen, von deren Bestehen ihr weiteres Verbleiben im Amte abhängig gemacht wurde.

"Manche legten darauf ihr Amt freiwillig nieder, die Mehrzahl erwies sich bei den Nachprüfungen als jetzt ausreichend unterrichtet. Bei dem Materiale, aus welchem namentlich auf dem Lande die Fleischbeschauer sich recrutiren, Häuslinge, kleine Handwerker, Hausschlächter und dergl. ist eine strenge Controlle derselben absolut

erforderlich, soll nicht das ganze Institut der mikroskopischen Fleischschau mit Recht in Misscredit gerathen. Für Unterrichts- und Prüfungszwecke stehen den Kreisphysikern jederzeit ausreichende Mengen trichinenhaltigen Fleisches im hiesigen Schlachthause zur Verfügung."—*Becker, 1891, pp. 112, 113.*"

"Es geht nicht nur das theoretische Wissen über die Entwicklungsgeschichte, 2c., der Trichinen verloren, auch das praktische Auffinden derselben ist in manchen Fällen äusserst mangelhaft und erklärt sich zum Theil aus dem mangelhaften Zustande, in welchem die Mikroskope in manchen Fällen vorgefunden wurden. Sie waren in nicht wenigen Fällen so verstaubt und verschmutzt, dass deutliche Bilder mit denselben überhaupt nicht gewonnen werden konnten. Wo Wissen und Können sich als durchaus unzureichend erwies, wurden die Betreffenden aus ihrem Amte entfernt, bei geringeren Mängeln ihnen aufgegeben, durch Theilnahme an einem neuen Unterrichtskurse die verloren gegangenen Kenntnisse zu ersetzen und sich nach einigen Wochen einer erneuten Prüfung vor dem Kreisphysikus zu unterziehen, von deren Bestehen das weitere verbleiben im Amte abhängig gemacht wurde. Eine Anzahl legte dann das Amt freiwillig nieder, andere erwiesen sich bei den Nachprüfungen als jetzt ausreichend unterrichtet.

"Da die Fleischbeschauer auf dem Lande sich meistens aus Häuslingen, kleinen Handwerkern und dergleichen rekrutiren, so ist strenge Controle derselben eine absolute Nothwendigkeit, soll nicht die ganze mikroskopische Fleischschau mit Recht in Misscredit gerathen."—*Becker, 1894, p. 95.*

"Daraus erklärt es sich, dass das Ergebniss der Nachprüfungen der Fleischbeschauer lurch die Kreisphysiker auf dem Lande wesentlich schlechter ausfällt als in der Stadt Hannover, und dass alljährlich eine Anzahl Fleischbeschauer wegen mangelnden theoretischen Wissens und Mangel an Fertigkeit in dem Auffinden von Trichinen aus ihrem Amte entweder entfernt werden oder sich nach erneuter Betheiligung an einem Unterrichtskurse einer wiederholten Prüfung unterziehen müssen. Auch erweisen sich bei der Nachprüfung die Mikroskope oft in einem so verschmutzten Zustande, dass klare Bilder mit denselben überall nicht gewonnen werden können, kurz, ohne regelmässige Beaufsichtigung und Nachprüfung von Seiten der Kreisphysiker dürfte die Zuverlässigkeit der Untersuchungen in vielen Fällen schweren Bedenken unterliegen."—*Becker, 1897, p. 90.*

Hildesheim..... 112 cases, 4 deaths.

Official local health reports are not accessible for the years 1881, 1883–1885, 1895–1898. No cases have been found for the years 1881, 1883–1885; 1886 (Grün, 1890, p. 45); 1889–1891 (Grün, 1894, p. 59); 1892–1894 (Grün, 1897); 1895–1898. The following cases have been collected:

1882, 7 cases, 0 death. No details regarding source.

1887, 103 cases, 3 deaths. Due to inspected meat.

1888, 2 cases, 1 death. Meat not inspected.

Thus, of 112 cases, 4 deaths, 103 cases, 3 deaths, were due to inspected meat; 2 cases, 1 death, to uninspected meat. My notes contain no data regarding 7 cases. No cases have been attributed to American meats, and no cases have been found recorded for the years since the readmission of American pork.

Grün (1897, p. 63) inveighs against the American inspection, and says that at least the hams and sides ought to be reinspected in Germany, although he believes that the reinspection of sausage can not be carried out. ("Die Untersuchung einer Wurst sei indessen unthun-

lich.") He fails, however, to show the danger connected with eating American meats.

Königsberg..... 313 cases, 33 deaths.

No official health reports for this district are accessible for the years 1895-1898. No cases have been collected for 1890. The following records have been compiled:

[1876-1879, 273 cases, 21 deaths. Details not all accessible. See Nath, 1885, p. 116.]

[1880, 29 cases, 0 death. Details not all accessible. See Nath, 1885, pp. 116, 117.]

1881, 3 cases, 1 death. Details not given in my notes.

1882, 14 cases, 0 death. Six cases due to inspected meat; 5 cases to uninspected meat; details regarding 3 cases lacking.

1883, 23 cases, 1 death. Eight cases, 1 death, due to uninspected meat; details regarding 15 cases are lacking.

1884, 50 cases, 9 deaths. Two cases due to inspected meat; 6 cases to uninspected meats; details lacking in 5 cases, 1 death; source known in remaining 37 cases, 8 deaths, but details regarding inspection not given.

1885, 37 cases, 1 death. Eleven cases due to uninspected meats; source of 7 cases known, but no details obtained regarding inspection; data lacking for 19 cases, 1 death.

1886, 32 cases, 3 deaths. Seven cases due to inspected meat, 6 cases to uninspected meat; source of 16 cases, 3 deaths, known, but details regarding inspection are not given; no data collected regarding 3 cases.

1887, 36 cases, 2 deaths. Thirty-two cases, 1 death, due to uninspected meat; 4 cases, 1 death, due to meat eaten before it was inspected.

1888, 26 cases, 4 deaths. All due to uninspected meat.

1889, 24 cases, 6 deaths. Fifteen cases, 4 deaths, due to uninspected meats; data regarding 9 cases, 2 deaths, not given in my notes.

[1890, 7 cases, 0 death. Omit from statistics, probably belong to 1889.]

1891, 16 cases, 0 death. Nine cases due to inspected meats; 7 cases due to meat eaten before inspection.

1892, 10 cases, 0 death. Source of 5 cases known, but no details given regarding inspection; data of 5 cases lacking.

1893, 10 cases, 1 death. Four cases due to inspected meat; 3 cases to uninspected meat; 3 cases, 1 death, due to meat eaten before inspection.

1894, 2 cases, 0 death. Due to uninspected meat.

1895, 3 cases, 1 death. Source known, details regarding inspection not given.

1896, 3 cases, 0 death. Due to uninspected meat.

1897, 20 cases, 4 deaths. Fifteen cases, 2 deaths, due to uninspected meat; source of 5 cases, 2 deaths, known, but details regarding inspection not given.

1898, 4 cases, 0 death. Said to have been due to inspected meat.

[1899, 4 cases, 1 death. Due to inspected meat.]

Thus, of a total (1881-1898) of 313 cases, 33 deaths, 32 cases were due to inspected meats; 132 cases, 12 deaths, to uninspected meats; 14 cases, 2 deaths, to meat eaten before it was inspected; the source of 73 cases, 14 deaths, was known, but data regarding inspection are not given; and no data regarding source of infection are collected for 62 cases, 5 deaths.

Chronologically, of the 313 cases, 33 deaths, 17 cases, 1 death, occurred prior to the 1883 decree; 244 cases, 26 deaths, occurred during the years of the exclusion of American pork (1883-1891), giving an aver-

age of 27½ cases, 2½ deaths, per year; 52 cases, 6 deaths (average of 7¼ cases, ¾ death), occurred since the readmission of American meat; of these 52 cases, 6 deaths, details regarding the source of infection are lacking in 5 cases. Not a single case has been found which has been attributed to American meats, although some of the most rabid attacks printed in Germany against American pork appear in an extreme partisan newspaper in Königsberg.

Liegnitz 65 cases, 8 deaths.

No local official sanitary reports accessible for the years 1881–1882, 1889–1891, 1895–1898. No cases were found for the years 1881, 1882; 1883–1888 (Philipp, 1886; 1890, p. 97); 1889–1890; 1892–1894 (Philipp, 1896, p. 110); 1895, 1898.

The following cases have been collected:

1891, 61 cases, 8 deaths. All due to inspected meat.

1896, 3 cases, 0 death. Due to uninspected meat.

1897, 1 case, 0 death. Apparently due to inspected meat.

It would thus appear that nearly all of the cases collected for this district were due to inspected meat. That Liegnitz does not owe its comparative freedom from trichinosis for so many years entirely to the trichina inspection will probably be admitted in view of the two following quotations from official reports. Philipp (1890, pp. 96, 97) in discussing the trichina inspection says:

“Diese Angabe [the percentage of trichinosis in hogs reported by the inspectors] sowie die in der vorstehenden Uebersicht angegebenen Befunde kann man leider nur als annähernd richtig ansehen, nachdem sich bei der von dem Herrn Regierungs-Präsidenten im Jahre 1888 in allen Kreisen angeordneten Nachprüfung der Fleischbeschauer und ihrer Mikroskope herausgestellt hat, dass ein Theil der Fleischbeschauer die bei ihnen vorausgesetzte Fähigkeit zu den fraglichen Untersuchungen nicht besitzt, und dass auch eine grosse Anzahl der geprüften Mikroskope durch Verunreinigung oder andre Mängel unbrauchbar geworden war.

“Die periodische Nachprüfung der Fleischbeschauer und ihrer Mikroskope war bereits bald nach der Einführung der obligatorischen Untersuchung des Schweinefleisches auf Trichinen im diesseitigen Regierungs Bezirke angeordnet worden, jedoch, wie Referent bei Gelegenheit seiner Dienstreisen ermittelte, in keinem Kreise, ausgenommen theilweise im Kreise Grünberg, zur Ausführung gekommen. Der Herr Regierungs-Präsident ordnete daher an, dass im Laufe des Jahres 1888 in sämtlichen Kreisen die fraglichen Nachprüfungen durch den Kreis-Physikus auf Kosten der betreffenden Amtsverbände stattfinden sollten.

“Das Ergebniss dieser Prüfungen war ein überraschendes, denn in der überwiegenden Mehrzahl der Kreise wurden zahlreiche grobe Mängel entdeckt. Ein und zwanzig Fleischbeschauer legten unmittelbar nach der Prüfung ihr Amt nieder oder wurden desselben enthoben; mehr als 80 bestanden in der Prüfung nicht und mussten theils einer Nachprüfung unterworfen, theils nochmals unterrichtet werden. Von den untersuchten Mikroskopen wurden gegen 90 stark verunreinigt oder sonst unbrauchbar gefunden.

“Diese Erfahrungen sind einerseits eine dringende Mahnung, die Prüfung der Fleischbeschauer und ihrer Mikroskope periodisch [p. 97] (etwa von 3 zu 3 Jahren) zu wiederholen, anderseits aber zeigen sie wie unzuverlässig der Schutz ist, den das Publicum durch die obligatorisch vorgeschriebene Untersuchung des Schweinefleisches zu

haben meint. Aus der Thatsache, dass Fälle von Trichinose bei Menschen im diesseitigen Regierungsbezirke bisher nicht in grosser Anzahl beobachtet worden sind, dürfte nur zu schliessen sein, dass die Unsitte, Schweinefleisch roh oder halbroh zu geniessen in Niederschlesien nicht sehr verbreitet ist; denn alle Polizei-Verordnungen, welche die Untersuchung des Schweinefleisches obligatorisch vorschreiben, können den beabsichtigten Schutz gegen die Uebertragung von Trichinen nur unvollkommen gewähren, während das Publicum durch solche Verordnungen sich leicht in Gleichgiltigkeit oder gar Sicherheit wiegen lässt.

"Im Kreise Bunzlau wurde ein Fleischbeschauer bestraft, weil er die zu untersuchenden Fleischproben eines Schweines, welches sich als Trichinös erwies, nicht selbst entnommen hatte, und der Fleischer wurde bestraft, weil er Theile des betreffenden Schweines vor der Untersuchung verkauft hatte. Ein Schaden entstand glücklicherweise nicht, weil das verkaufte Fleisch nur gekocht genossen worden war."

In connection with this report from Dr. Philipp, compare the outbreaks in 1891 at Würchand, p. 81, and Mühlräditz, p. 80. Philipp (1896, p. 111) in his last report again pays his respects to the inspection by stating that as a result of the reexamination of the microscopists in 1892, 40 of them resigned, part of them voluntarily, part of them because they were compelled to do so, and a large number had to submit to another examination. Of the microscopes, 26 were absolutely useless, and many were found dirty. Philipp warns people not to eat raw pork, since "the obligatory trichina inspection can not give a safe protection (sicheren Schutz) against trichinosis."

"Die im diesseitigen Regierungsbezirke eingeführte periodische Nachprüfung der Fleischbeschauer und ihrer Mikroskope durch die zuständigen Kreisphysiker hat sich bewährt und in der Mehrzahl der Kreise überraschende Thatsachen zu Tage gefördert. In Folge der im Jahre 1892 abgehaltenen Prüfung legten 40 Fleischbeschauer ihr Amt theils freiwillig nieder, theils wurden sie hierzu veranlasst, und eine grosse Anzahl musste sich einer Nachprüfung unterwerfen.

"Von den untersuchten Mikroskopen wurden 26 für gänzlich unbrauchbar und viele stark verunreinigt befunden.

"Die Erfahrungen bei den in den Jahren 1888 und 1892 abgehaltenen Nachprüfungen fordern dringend zur Fortsetzung dieser Kontrolle auf. Daneben aber darf nicht versäumt werden, das Publikum wiederholt vor dem Genusse rohen oder nicht gehörig durchgekochten und nicht durchgebratenen Schweinefleisches zu warnen und darauf hinzuweisen, dass die obligatorisch eingeführte Untersuchung einen sicheren Schutz gegen die Uebertragung von Trichinen nicht gewähren könne."—*Philipp, 1896, p. 111.*

Lüneburg 0 case, 0 death.

No official district sanitary reports are accessible for the years 1895–1897, but no cases were found for these years in the statistics of the Imperial health office. No cases have been found in the official sanitary reports for the years 1881–1894 (Alten, 1883, 1887, and 1890, and Nöller, 1897). Nöller (1897, p. 239) states that the obligatory inspection was instituted in this Bezirk in 1877. During the years 1889–1894, 978,174 hogs were examined by 1,168 inspectors and only 22 were found trichinous, or 1:44,461. Such a percentage is difficult to accept as correct. It is, however, interesting to note that, assuming each hog to have been found by a separate inspector, 1,146

microscopists did not find any trichinæ in the hogs slaughtered in the district during the six years. Nöller (1897, p. 239) states:

“Nach den bei den Nachprüfungen gemachten Wahrnehmungen glauben die Kreisphysiker im Allgemeinen zu der Annahme berechtigt zu sein, dass die Fleischbeschauer vorkommenden Falls im Stande sind Trichinen mit Sicherheit aufzufinden, da sie bei oft theoretisch grosse Unwissenheit durchschnittlich ein gutes Beobachtungstalent erkennen liessen. Freilich mussten hin und wieder einige unfähige oder durch Alter und aus anderen Ursachen unfähig gewordene Fleischbeschauer, namentlich Potatoren entfernt werden.

“Die Mikroskope, obgleich meistens gut gehalten, waren häufig für den Zweck wenig geeignet, mit kleinem Tisch und engem Gesichtsfeld. * * * pp. 240-241. Der Kreisphysikus des Kreises Winsen * * * fand, dass sie bei ihren Untersuchungen oft Jahre hindurch niemals eine Trichine fanden * * * Der Kreisphysikus des Kreises Fallingsb. [veranlasste] die Versendung von Fleischproben von einem trichinös befundenen Schwein an sämtliche Fleischbeschauer seines Kreises mit der Aufforderung, über den Befund zu berichten. Alle berichteten, dass sie Trichinen gefunden hätten bis auf fünf, unter denen 2 Apotheker und 1 Thierarzt waren.”

Magdeburg..... 572 cases, 66 deaths.

No official local sanitary reports are accessible for the years 1881, 1882, 1889-1897. No cases have been found for the years 1881, 1882, 1886-1888 (Voigt, 1891, p. 30); 1890-1892, 1894, 1896, 1898. The following statistics have been collected:

1883, 426 cases, 66 deaths. Four hundred and three cases, 66 deaths, apparently due to inspected meat; source of other 23 cases apparently not established.

1884, 10 cases, 0 death. Three cases due to inspected meats; details of 7 cases are lacking.

1885, 25 cases, 0 death. May have been due to inspected meats, but source of infection apparently not established.

1889, 50 cases, 0 death. Details lacking.

1893, 3 cases, 0 death. Due to inspected meat.

1895, 55 cases, 0 death. Due to inspected meat.

1897, 3 cases, 0 death. Due to inspected meat.

[1899, 3 cases, 0 death. Details not given.]

Thus, of 572 cases, 66 deaths (1881-1898), 511 cases, 66 deaths, occurred during the years of exclusion of American meats, and 61 cases (all accounted for as due to inspected meat) occurred during 1892-1898 (after the readmission). In connection with 7 cases no data are given. All of the others may have been due to inspected meat, although in three outbreaks some of the reports state that the identity of the meat with that of the inspectors' books could not be established.

Voigt (1890, pp. 86-88), in his official report for 1886-1888, makes one of the most scathing attacks upon the German inspection which has ever appeared in print. He says that almost without exception the microscopes in use were absolutely useless. A large number of inspectors had never seen a trichina before the reexamination here described. The preparations made by some of the inspectors showed that a considerable number of the microscopists had no idea of the use of the microscope. Some of the men did not even recognize the tri-

chinæ when preparations were made for them and placed under the microscope. The eyesight was so poor in some cases that the inspectors "voluntarily" resigned. Of 1,397 inspectors, only 850 were able to stand their reexamination. But these statements can scarcely be believed unless the original words are quoted. The original is as follows:

P. 45. "Wenngleich angenommen werden dürfte, dass die Durchführung der neuen Polizei-Verordnung bei den bereits auf Grund der Polizei-Verordnung vom 12. Dezember 1865 concessionirten Fleischbeschauern auf nennenswerthe Schwierigkeiten nicht stossen würde, so liessen doch die ersten Prüfungen schon erkennen, dass die bisherigen Fleischbeschauer ihrer Aufgabe im Allgemeinen nicht gewachsen waren und dass thatsächlich Mängel bestanden, welche die Wiederkehr ähnlicher Katastrophen wie in Hedersleben, Harsleben und jüngst in Emersleben zu fördern geeignet waren. Dahin gehörten vor allen Dingen die fast ausnahmslos absolut ungenügenden Mikroskope, die entweder ihrer Form nach Spielzeugen glichen oder äusserst primitive Construction zeigten, oder aber durch ihren längeren Gebrauch und durch ihre nachlässige, höchst unsaubere Behandlung längst schon eines vollständigen Ersatzes bedurften.

"Für diese Mängel konnten jedoch nicht nur die allerdings nothwendigen Sparsamkeitsrücksichten der in den meisten Fällen in nur dürftigen Verhältnissen lebenden Fleischbeschauer verantwortlich gemacht werden, es hat vielmehr in verschiedenen Fällen Schwierigkeiten bereitet die betreffenden Fleischbeschauer von der Unzulänglichkeit und absoluten Unbrauchbarkeit ihrer Mikroskope zu überzeugen, weil ein grosser Anzahl Fleischbeschauer Trichinen thatsächlich zum ersten Male bei der hier in Rede stehenden Nachprüfung kennen gelernt hat.

"Im Weiteren wurden von einem nicht geringen Theil dieser alten Fleischbeschauer Quetschpräparate geliefert, welche keinen Zweifel darüber liessen, dass diese Prüflinge auch keine Ahnung vom Mikroskopiren hatten. Es erregte deshalb auch kein Aufsehen mehr, als verschiedene der alten Fleischbeschauer keine Trichinen erkannten, obwohl diese in dem anderweit angefertigten und ordnungsmässig unter das Mikroskop gebrachten Präparat unzweideutig hervortraten und auch von Laien ohne Mühe gesehen wurden. Ein alter, in der Nachprüfung durchgefallener Fleischbeschauer hat im Prüfungstermin sogar erklärt, das Vorhandensein von Trichinen noch bezweifeln zu müssen.

"Bei einigen Prüflingen wurde während der Prüfung eine so hochgradige Einschränkung des Sehvermögens wahrgenommen, dass die betreffenden Personen auf Vorhalt erklärten, die Functionen eines Fleischbeschauers freiwillig niederlegen zu wollen und ist es nur in einem Falle zur förmlichen Einleitung des Concessions-Entziehungs-Verfahrens gekommen."

Page 46: "Von den 1,397 alten Fleischbeschauern, welche zur Ablegung der Nachprüfung aufgefordert worden sind haben nur 850 die Prüfung bestanden, während die übrigen theils schon vor der Prüfung, theils nach wiederholter erfolgloser Nachprüfung, die ihnen auf Grund der Polizei-Verordnung vom 12. Dezember 1865 ertheilte Concession, mit Ausnahme einiger Fälle, freiwillig zurückgetreten haben. Aber auch von den in der Nachprüfung bestanden Personen haben mehr als die Hälfte erst nach erfolgreicher Wiederholung der Prüfung in den Besitz des Fähigkeitszeugnisses für die Fortsetzung des Gewerbetriebes als Fleischbeschauer gelangen können. Im Wesentlichen war die vorgeschriebene Nachprüfung der hier in Rede stehenden Fleischbeschauer im October 1888 beendet. Bis dahin haben auch 232, zur Ausübung des Gewerbetriebes als Fleischbeschauer überhaupt noch nicht berechnete Personen die Prüfung bestanden, zu deren Ablegung dieselben sich behufs Neubestellung als Fleischbeschauer freiwillig gemeldet hatten. Auch die

Mehrzahl dieser Personen konnte erst nach einer einmaligen Wiederholung der Prüfung das Fähigkeitszeugniss ertheilt werden, während noch andere Prüfungskandidaten sich auch einer wiederholten Prüfung erfolglos unterzogen haben. * * * Bezüglich der Zulassung von Frauen zur Ansübung des Gewerbebetriebes als Fleischbeschauer sind bisher im Allgemeinen nur gute Erfahrungen gemacht; namentlich sind die Frauen zum Prüfungstermin mit seltenen Ausnahmen besser vorbereitet erschienen als die männlichen Prüflinge."

With an official report like this before us, it can scarcely be maintained that the infrequency of outbreaks (5) up to October, 1888, was due to the microscopic inspection.

Marienwerder 333 cases, 15 deaths.

No local official health reports are accessible for the years 1881, 1895-1898. No cases have been found for the years 1882 (Pianka, 1884, p. 25); 1891-1894 (Barnick, 1897, pp. 214, 215); 1895.

1881, 3 cases, 0 death. Source known, details regarding inspection not given.

1883, 59 cases, 1 death. Details not in my notes.

1884, 34 cases, 5 deaths. Ten cases, 1 death, due to uninspected meat; source of 24 cases, 4 deaths not traced.

1885, 32 cases, 0 death. No details published.

1886, 20 cases, 1 death. Three cases, 1 death, due to inspected meat; source of 3 cases probably traced, details regarding inspection not known; data regarding 14 cases not found.

1887, 6 cases, 2 deaths. Due to uninspected meat.

1888, 16 cases, 3 deaths. Fourteen cases, 3 deaths, due to uninspected meat; details regarding 2 cases not found.

1889, 12 cases, 0 death. Four cases due to inspected meat; 3 cases to uninspected meat; details of 5 cases not collected.

1890, 5 cases, 0 death. Due to uninspected meat.

1896, 14 cases, 1 death. Source of infection known in 11 cases; details of 3 cases, 1 death, not given.

1897, 98 cases, 2 deaths. Eighty-eight cases, 2 deaths, due to inspected meat; 10 cases to uninspected meats.

1898, 34 cases, 0 death. Due to inspected meat.

[1899, 6 cases, 0 death. Details incomplete or not given.]

Thus of the 333 cases, 15 deaths (1881-1898), 3 cases (of known source) occurred before the year 1883; 184 cases, 12 deaths, during 1883-1891; 146 cases, 3 deaths, during 1892-1898. Of the latter 146 cases, 3 deaths, 122 cases, 2 deaths, were due to inspected meat; 10 cases, to uninspected meat; 11 cases were of known origin, but details regarding inspection are incomplete. The origin of 3 cases, 1 death, is not given. Of the total 187 cases, 12 deaths, during 1881-1891, 38 cases, 6 deaths, were due to uninspected meats; 24 cases, 4 deaths, were not traced; source was known for 6 cases, but details regarding inspection are not given; the details of 112 cases, 1 death, are lacking.

Not a single case has been alleged to be due to American pork.

Merseburg 651 cases, 14 deaths.

No official reports are accessible for the years 1895-1898. No cases have been found for the years 1887 (Wolff, 1890, p. 85); 1890, 1892,

1894 (Wolff & Penkert, 1896, p. 131); 1896-1898. The following statistics have been gathered:

1881, 148 cases, 1 death. All due to inspected meat.

1882, 7 cases, 0 death. All due to inspected meat.

1883, 40 cases, 0 death. At least 32 cases, probably all, due to inspected meat.

1884, 91 cases, 12 deaths. Eighty-eight cases, 12 deaths, due to inspected meat; details insufficient regarding other 3 cases.

1885, 29 cases, 0 death. Six cases due to inspected meat; 23 cases not definitely traced.

1886, 15 cases, 0 death. All apparently due to inspected meat.

1888, 6 cases, 0 death. All due to inspected meat.

1889, 69 cases, 0 death. Fifty-five cases apparently due to inspected meat; source of 14 cases could not be traced.

1891, 3 cases, 0 death. Details insufficient.

1893, 1 case, 0 death. Statements indefinite, but source apparently traced.

1895, 242 cases, 1 death. Source traced; meat may or may not have been inspected.

Important details are lacking. Of the 651 cases, 14 deaths, 155 cases, 1 death, occurred prior to the 1883 exclusion decree, but are all accounted for as being due to inspected meat; hence the source was known; 253 cases, 12 deaths, occurred during the years of exclusion (1883-1891); of these, it appears that 210 cases, 12 deaths, were apparently due to inspected meat; 14 cases could not be traced to the source of infection; details regarding 29 cases are insufficient. Since the decree of readmission (1892-1898) 243 cases, 1 death, are recorded; 242 cases, 1 death, were traced to a lot of several hogs, only one of which was inspected; 1 case was apparently traced, but the statements are somewhat indefinite.

Not a single case has been attributed to American pork.

Minden 0 case, 0 death.

No Bezirk health reports are accessible for the years 1895-1897. No cases of trichinosis have been found for the years 1881-1885 (Schultz-Hencke, 1883, 1884, p. 58; 1887, p. 73); 1886-1897 (Rapmund, 1892, p. 106; 1894, pp. 101, 133; 1897, pp. 95, 103). During 1889-1891, 16 microscopists, and during 1892-1894, 19 microscopists were found so deficient in their work and showed such ignorance in their reexamination that their authorizations were revoked.

Münster 1 case, 0 death.

No official district sanitary reports are accessible for the years 1892-1897. No cases of trichinosis have been found for the years 1882-1897; for 1882, see Hoogeweg, 1883; for 1883-1885, see Hölker, 1887, p. 51; 1886-1888, see Kölker, 1890, p. 80; 1889-1891, see Kölker, 1894, p. 66. The only case found is one recorded for 1881; the disease was contracted in R.-B. Arnsberg.

Oppeln 25 cases, 0 death.

Official Bezirk sanitary reports for the years 1895-1898 are not accessible. Up to 1876 no cases of trichinosis were known in this

district (Pistor, 1882, p. 32); 3 cases in 1876; several in 1878. No cases have been found for the years 1877, 1879, 1880 (Pistor, 1882, p. 32); 1881–1883 (Noack, 1883, 1884, 1887, p. 102); 1886, 1888–1891 (Schmidtman, 1893, p. 56); 1892–1894 (Roth, 1896, p. 108); 1895–1896, 1898. The only statistics gathered are:

1884, 3 cases, 0 death. Details not given.

1885, 16 cases, 0 death. Thirteen cases from "Polish sausage;" details regarding inspection not given.

1887, 3 cases, 0 death. Due to meat which was probably inspected.

1897, 3 cases, 0 death. Details not given.

Thus of 25 cases, 0 death, 22 cases are reported for the years of exclusion (1883–1891) of American meats. One outbreak (? 3 cases) is reported since 1891, but no details are accessible. Of the 25 cases, 13 were due to "Polish sausage," but no details are given regarding inspection; 3 cases were apparently due to inspected meats; details for 6 cases are lacking.

That Oppeln does not owe its comparative freedom from trichinosis entirely to its trichina inspection may be concluded from the official criticisms. Compare, for instance, the following extracts:

"Auch das Ergebniss der Fleischschau vom Jahre 1881 liefert den Beweis, dass sich die obligatorische Schweinefleischschau im hiesigen Bezirk bewährt hat; sie würde jedenfalls noch günstiger sein, wenn die Untersuchungen durch die Fleischbeschauer in zuverlässiger Weise vorgenommen würden, was leider bisher nicht der Fall gewesen ist. Es lässt sich mit Bestimmtheit erwarten, dass die mit Trichinen und Finnen durchsetzten Schweine in noch viel grösserer Zahl aufgefunden werden würden, wenn die Fleischschau in den Händen zuverlässiger Persönlichkeiten läge, wenn dieselben sorgfältiger untersuchten und ihre Mikroskope mit Umsicht zu handhaben verständen. Wie saumselig manche Fleischbeschauer bei den Untersuchungen verfahren, lässt sich aus dem einen Beispiel erkennen, dass in einem Orte des hiesigen Bezirkes ein von 2 Fleischern gemeinschaftlich geschlachtetes Schwein von 2 Fleischschauern untersucht wurde: der eine derselben hatte in der ihm übergebenen Hälfte des geschlachteten Schweines reichlich Trichinen gefunden, der andere erklärte seine Hälfte für völlig trichinenfrei; die Nachrevision ergab aber, dass das qu. Schwein in der That reichlich mit Trichinen durchsetzt war."—Noack, 1883, p. 41.

Veröff., 1894, p. 64, mentions an instance where a hog was passed as free from trichinæ. Later examination showed it to be trichinous.

"Die Wahrnehmung, dass die Trichinenschau nicht durchweg in geeigneter Weise ausgeführt wurde und dass sich im Laufe der Jahre erhebliche Misstände ausgebildet hatten, gaben dem Herrn Regierungs-Präsidenten Veranlassung, Erhebungen über die Trichinenschau im Regierungsbezirk anzustellen und auf Grund der eingegangenen Berichte durch die anliegende Verfügung vom 16. Februar 1891 die regelmässige Nachprüfung der Fleischbeschauer anzuordnen und die Beaufsichtigung derselben zu regeln.

"Der Ausfall der von den Kreisphysikern vorgenommenen ersten Nachprüfungen war ein so ungünstiger, dass es im öffentlichen Gesundheitsinteresse geboten erschien, die Nachprüfungen im ersten Jahre nicht bloss auf $\frac{1}{3}$, sondern alsbald auf sämmtliche Fleischbeschauer zu erstrecken."—Schmidtman, 1893, p. 95.

"Während den beiden folgenden Jahren (1893, 1894) vorschriftsmässig jedes mal

je ein Drittel der sämtlichen Beschauer zur Nachprüfung gelangte, im Allgemeinen hat die Trichinenschau in dem abgelaufenen dreijährigen Zeitraum zu erheblichen Erinnerungen nicht Anlass gegeben. Von den Nachgeprüften durchschnittlich 3% den an dieselben in praktischen Beziehung zu stellenden Forderungen nicht; in diesen Fällen wurde die Prüfung alsbald wiederholt. In Fällen, wo auch die zweite Nachprüfung nicht genügte, wurde die Entlassung des betreffenden Fleischbeschauers in die Wege geleitet. Beanstandungen der Instrumente, die in jedem Falle alsbald beseitigt wurden, kamen nur in geringer Zahl vor."—*Roth, 1896, p. 108.*

Osnabrück..... 0 case, 0 death.

No local health reports are accessible for the years 1881, 1882, 1892–1898. No cases have been found for this district in any reports for 1883–1894. (Bitter, 1888; 1891; 1893; 1894, p. 27); 1895–1898.

Posen..... 219 cases, 21 deaths.

Official local health reports are lacking for the years 1895–1898. No cases have been found for the years 1883, 1885 (Gammel, 1887, p. 14); 1888 (Dieterich, 1891, p. 139). The following statistics have been gathered:

1881, 20 cases, 0 death. Apparently all due to inspected meat.

1882, 5 cases, 1 death. May have been due to inspected meat; not certain; case not definitely explained.

1884, 10 cases, 0 death. Hog not inspected.

1886, 4 cases, 0 death. Source traced; details regarding inspection not given.

1887, 9 cases, 5 deaths. Source of 6 cases, 3 deaths, traced; details regarding inspection not given; details lacking for 3 cases, 2 deaths.

1889, 11 cases, 2 deaths. Eight cases due to inspected meat; 3 cases, 2 deaths, to uninspected meat.

1890, 16 cases, 0 death. Details lacking.

1891, 24 cases, 4 deaths. Six cases, 1 death, due to inspected meat; source of 2 cases not traced; details of 16 cases, 3 deaths, lacking.

1892, 31 cases, 2 deaths. Four cases, 1 death, due to uninspected meat; source of 27 cases, 1 death, apparently traced, but details regarding inspection are lacking.

1893, 3 cases, 0 death. Details not given.

1894, 51 cases, 5 deaths. At least 22 cases, 1 death, due to inspected meat; 7 cases, 1 death, due to uninspected Russian meat; 3 cases, 1 death, due to condemned meat; 3 cases, 2 deaths, due to meat known to be trichinous; source of 3 cases known; no details given regarding inspection; source of 13 cases not traced.

1895, 23 cases, 2 deaths. Eight cases, 1 death, due to inspected meat; 11 cases, 1 death, due to meat smuggled away from the inspection; details of 4 cases lacking.

1896, 7 cases, 0 death. Five cases due to inspected meat; 2 cases due to condemned meat.

1897, 3 cases, 0 death. Due to condemned meat.

1898, 2 cases, 0 death. No details given.

Thus, of a total of 219 cases, 21 deaths, 25 cases, 1 death, occurred before the 1883 decree, but none of them were attributed to American meats; 20 cases were apparently due to uninspected meat; 5 cases, 1 death, not definitely established, although source of meat was known. During the exclusion of American pork, 74 cases, 11 deaths, are reported. Of these, details are lacking for 35 cases, 5 deaths; 14 cases, 3 deaths, were due to inspected meat; 13 cases, 2 deaths, were

due to uninspected meat; the source of 10 cases, 3 deaths, was known, but details regarding inspection are not in my notes; 2 cases were not traced.

Since the readmission of American pork (1892-1898), 120 cases, 9 deaths, have occurred, but not one of them has been attributed to American meat; 35 cases, 2 deaths, were due to inspected meat; 8 cases, 1 death, to condemned meat; 3 cases, 2 deaths, to meat known to be trichinous; 11 cases, 1 death, to meat smuggled away from the inspection; 7 cases, 1 death, to uninspected Russian meat; source of 30 cases, 1 death, known, but details regarding inspection lacking in my notes; 9 cases given without details; 13 cases not traced to source of infection; 4 cases, 1 death, due to uninspected meat.

The following extracts from official reports are instructive:

“Diese Angaben beweisen indess, dass eine absolute Zuverlässigkeit durch das Fleischauwesen nicht vorhanden ist. Einerseits erscheint es geboten, die Beaufsichtigung der Fleischbeschauer zu verschärfen, wie bereits in dem vorigen Sanitätsbericht betont worden ist.

“Die Regelung der Angelegenheit fällt in die nächste Berichtsperiode. Andererseits erscheint die Frage gerechtfertigt, ob nicht die Gefahr der Trichinenerkrankung der Menschen wesentlich herabgemindert werden kann, wenn die Herstellung von Wurst aus ungekochtem Schweinefleisch beziehentlich die Zubereitungen aus Schweinefleisch zum Rohessen (Hackfleisch) bezw. der Genuss des rohen Schweinefleisches durch Polizei-Reglement untersagt würden. Diese Volksunsitte des Genusses roher Wurst und rohen Schweinefleisches wird trotz aller Bemühungen der Trichinenschau noch viele Erkrankungen und Todesfälle der Menschen an der Trichinose verursachen.—Von einer thierärztlichen Bekämpfung der Ursachen der Verbreitung der Trichinose der Schweine hat sich bis jetzt nichts verlauten lassen. Allerdings können an eine bessere Haltung der Schweine, in Bezug auf Ernährung und Unterbringung, unter hiesigen Verhältnissen um so weniger grössere Anforderungen gestellt werden, als die Besitzer dieser nützlichen, Fleisch und Fett liefernden Thierklasse, soweit sie nicht dem Stande der Grossbesitzer angehören, mit den Sorgen für die eigene Unterbringung und Ernährung hart genug geplagt sind. Angesichts der Thatsache, dass der Bezirk jährlich eine Summe von mehr als 150,000 Mark für die in ihren Resultaten immer noch einen unsicheren Schutz gewährende Trichinenschau opfern muss, ist vom nationalökonomischen Standpunkte gerechtfertigt, Wege und Mittel zu ersinnen und einzuleiten, um das Uebel wirksamer an der Wurzel anzufassen und auszurotten. (Belehrungen, Verbesserung der Schweinezucht, Prämiirung musterhafter Zucht- und Mastanstalten des kleinbäuerlichen Betriebes.)

“Eine allgemeine obligatorische Fleischschau ist im Regierungs-Bezirk noch nicht eingeführt. Die mikroskopische Fleischschau ist am vollkommensten in denjenigen Gemeinden durchgeführt, welche öffentliche Schlachthaus-Einrichtungen besitzen.”—*Géronne, 1894, p. 123.*

Potsdam 158 cases, 1 death.

Official local health reports are not accessible for the years 1895-1898. No cases have been found for the years 1882 (Kanzow, 1884); 1885 (Kanzow, 1887, p. 76); 1889-1890 (Kanzow, 1893); 1893-1894 (Kanzow, 1897); 1896-1898. The following cases have been collected:

1881, 5 cases, 0 death. Two cases due to eating meat before result of inspection was known; in 3 cases the meat could not be traced.

1883, 8 cases, 0 death. All due to uninspected meats.

1884, 59 cases, 1 death. Five cases due to inspected pork; 11 cases due to uninspected meat; source of 42 cases, 1 death, apparently known, but no details given regarding inspection; details lacking in 1 case.

1886, 5 cases, 0 death. Source of 3 cases known, but details regarding inspection not given; details regarding meat in 2 cases not known.

1887, 1 case, 0 death. Due to uninspected meat.

1888, 18 cases, 0 death. Eleven cases due to inspected meat; source of 7 cases known, but details regarding inspection not given.

1891, 1 case, 0 death. Source known; details regarding inspection not given.

1892, 40 cases, 0 death. Details not given.

1895, 21 cases, 0 death. Source known; it is not determined whether the hog was smuggled away from the inspection or not.

Thus, of 158 cases, 1 death, 5 cases occurred before the 1883 decree. In 3 of these cases the meat could not be traced; 2 cases were due to meat eaten before results of the inspection were known. During the years of exclusion, 92 cases, 1 death, were reported. Twenty of these were due to uninspected meat; 16 to inspected meat; source was known for 53 cases, 1 death, but details regarding inspection lacking; details unknown in 2 cases and lacking in 1 case. Since the readmission of American pork, 61 cases have been reported. Details of 40 cases are not given; 21 cases were traced to source of infection, but it is not established whether or not the hog was smuggled away from the inspection. No cases have been traced to American meat.

The following extract from official reports may be noted:

“Zu diesen Untersuchungen waren in den 3 Berichtsjahren bezw. 1672, 1709, 1721 Fleischbeschauer bestellt und im Jahre 1894 nur in 3 Forstrevieren des Kreises Oberbarnim, einem Gutsbezirk und einer Oberförsterei des Kreises Ostprignitz, 3 Amtsbezirken des Kreises Ruppin und 4 Gutsbezirken im Kreise Templin keine Fleischbeschauer vorhanden. In letzterem Kreise mussten sich im Jahre 1894 auf Anordnung des Landraths sämtliche Fleischbeschauer einer Nachprüfung durch den Kreisphysikus unterziehen und wie nothwendig dieses war, ergab sich daraus, dass mehrere Fleischbeschauer das Amt sofort niederlegten, mehrere die Nachprüfung nicht bestanden und einige Mikroskope sich als schadhaft [p. 134] und unbrauchbar erwiesen. Demnach dürfte die häufigere Wiederholung solcher Nachprüfungen dringend nöthig sein, um die Trichinenschau (einigermassen) vertrauenswürdig zu erhalten.”—*Kanzow, 1897, pp. 133, 134.*

Schleswig-Holstein 24 cases, 1 death.

Local official sanitary reports are not accessible for the years 1895–1898. No cases have been found for the years 1881–1885 (Bockendahl, 1882, p. 19; 1883, p. 13; 1887, p. 153); 1887–1894 (Bockendahl, 1889, p. 105; 1893); 1895–1898. The following cases have been collected:

1886, 20 cases, 1 death. Four cases due to meat used before inspector reported; 16 cases, 1 death, due to uninspected meat.

1888, 4 cases, 0 death. Source known; details regarding inspection not given.

Thus the only cases collected for 1881–1898 occurred during the exclusion of American meats; source known in all cases. See also p. 42.

Bockendahl (1893, p. 114) remarks upon the objection to the general trichina inspection as follows:

"Gegen die zwangsweise Trichinenschau sträubt sich die Provinz durchaus, weil sie, wie nach den Volksgewohnheiten erklärlich, das Leiden einer Trichinenerkrankung bei Massen noch nicht kennen gelernt hat."

Sigmaringen 0 case, 0 death.

The official district health reports are not accessible for the years 1889-1891, 1895-1898. According to Koch (1883, p. 61) no cases were known in 1881 or earlier. No cases were found for the years 1882-1885 (Koch, 1887); 1886-1888 (Lauchert, 1890, p. 52); 1889-1891, 1892-1894 (Schmidt, 1897, p. 71); 1895-1898. Koch (1883, p. 61) remarks:

"Was nun speciell die Trichinenfrage betrifft, so ist in den Hohenzollernschen Landen nie ein Fall von derartiger Erkrankungen vorgekommen und scheint uns in der That die Gefahr für die hiesige Bevölkerung nicht vorhanden zu sein so lange die Gewohnheit, das Schweinefleisch, frisch wie geräuchert, nur in gekochtem Zustande zu geniessen, fortbesteht. Sollte aber in den Städten, wie dies für die beiden grösseren: Sigmaringen und Hechingen, den Anschein hat, die Sitte, rohen (meist westphälischen) von aussen bezogenen Schinken im Ausschnitt zu verkaufen, um sich greifen, so wäre dadurch wenigstens die Möglichkeit des Ausbruches dieser Krankheit auch hier gegeben."

Stade 0 case, 0 death.

Official district sanitary reports are not accessible for the years 1895-1898. No cases of trichinosis have been found for the years 1881-1898.

That the freedom of Stade from trichinosis has not been entirely due to the trichina inspection will be gathered from the following extracts from the official reports. It will be noticed that the inspection was ordered in 1877, and that its introduction met with considerable opposition from the people; that twenty years later (1897) it had not been possible to carry it out in all places.

"Zwei trichinös befundene amerikanische Speckseiten resp. Schinken waren von Hamburger Trichinenuntersuchern für trichinafrei erklärt worden, obgleich bei den Nachrevisionen die Parasiten zahlreich genug angetroffen wurden, um sie bei aufmerksamer Untersuchung nicht übersehen zu können."—*Bohde, 1883a, p. 27.*

"Der Durchführung der durch eine Polizeiverordnung vom 12. December 1877 angeordneten Fleischschau in allen Gemeinden stehen noch immer erhebliche Schwierigkeiten dadurch entgegen, dass die Landbevölkerung die Fleischschau für vollkommen überflüssig hält und den mit derselben verbundenen Weiterungen und Kosten sich zu entziehen sucht, indem sie diejenigen Personen, welche geneigt sind, als Fleischbeschauer sich ausbilden und anstellen zu lassen, hiervon zurückhält, sowie den Angestellten den Dienst möglichst verleidet.

"Im Amte Verden z. B., wo bislang noch überall keine Fleischschau stattfindet, war es den Bemühungen des Kreishauptmanns gelungen, in 6 Gemeinden Personen zur Ausbildung als Fleischbeschauer zu veranlassen, indessen zogen alle, um nicht in Feindschaft mit ihren Gemeindegossen zu gerathen, ihre Anträge auf Anstellung wieder zurück, oder liessen wiederholte Aufforderungen zur Vorlage ihrer Qualificationszeugnisse unbeachtet.

"Die auf Anregung der Landdrostei seitens der Obrigkeiten, in deren Bezirken die allgemeine Fleischschau noch nicht obligatorisch geworden war, im Berichtsjahre

erneuten Versuche, zu Fleischbeschauern geeignete Personen ausfindig zu machen, sind in den Ämtern Himmelpforten und Bremervörde von bestem Erfolge gewesen und haben die Einführung der Fleischbeschau in der Mehrzahl der Gemeinden zur Folge gehabt. Im erstern Amte sind nur noch 11, im zweiten noch 9, im Amte Neuhaus noch 7 Gemeinden rückständig geblieben. Im Stader Marschkreise wird die Fleischbeschau bereits im ganzen Bezirke ausgeübt. Auch in den Ämtern Lehe und Zeven sind im Berichtsjahre 18 bezw. 17 Fleischbeschauer neu angestellt worden. Die im Stadtbezirke Buxtehude bislang nur rücksichtlich der von Gewerbetreibenden geschlachteten Schweine in Anwendung gebrachte Fleischbeschau wurde auf sämtliche geschlachtete Schweine ausgedehnt.

“Es darf daher gehofft werden, dass, wenn die Obrigkeiten sich der Sache annehmen und die gegen die Fleischbeschau in Scene gesetzten Agitationen und Beschwerden sich als erfolglos erwiesen haben, die vollständige Durchführung der Massregel für den ganzen Landdrosteibezirk in nicht zu langer Zeit zu erreichen sein wird.”—*Bohde, 1883b, p. 28.*

P. 120: “Die Durchführung der obligatorischen Fleischbeschau auf Trichinen und Finnen hat in den Bizirken, in welchen dieselbe bislang nicht ausgeübt wurde, wiederum erfreuliche Fortschritte gemacht; seit dem Jahre 1880 hat die Zahl der Fleischbeschauer sich um 125 [p. 121] vergrößert. Auf dem platten Lande wird der Nutzen der Fleischbeschau aber noch immer verkannt und die Massregel als eine das Schweinefleisch vertheuernde Belästigung angesehen.

“In einigen Amtsbezirken hält es daher schwer, zu Fleischbeschauern geeignete Personen zu finden; die Bevölkerung sucht solche auf jede Weise davon zurückzuhalten. Im Dorfe Scheessel legte z. B. nach dem Berichte des Kreisphysikus ein sehr tüchtiger Fleischbeschauer das Amt nieder, weil die aufgeregten Bauern ihm wiederholt die Fenster einwarfen. Im Amte Verden ist erst nach jahrelangen Bemühungen in einer einzigen Gemeinde die Anstellung eines Fleischbeschauers möglich geworden. Gegen die obligatorische Fleischbeschau beschwerte sich alsbald die Gemeinde unter Hinweisung auf den Umstand, dass auch in der Stadt Verden die Fleischau nur facultativ geübt würde. Ein Grund, der Beschwerde stattzugeben, lag um so weniger vor, als ein in einer Nachbargemeinde gezüchtetes Schwein trichinös befunden worden war. Dagegen wurde der Magistrat in Verden veranlasst, die Polizei-Verordnung vom 12. December 1877 über die Untersuchung des Schweinefleisches auf Trichinen in Kraft zu setzen.

“Um die Untersuchungsgebühren für die Fleischbeschauer zu ermässigen, schlossen mehrere Gemeinden Contracte, wonach jene statt der amtlich auf 75 Pf. für die Untersuchung eines Schweines festgesetzten Taxe nur 30 bis 40 Pf. erhalten sollten. In der Voraussetzung, dass diese unzureichende Entschädigung die ordnungsmässigen Untersuchungen beeinträchtigen würde, beabsichtigte im Jahre 1883 ein Kreishauptmann die taxmässigen Gebühren von den Besitzern der Schweine im Zwangsverfahren betreiben zu lassen. Die zuständigen Herren Minister, welchen die Angelegenheit vorgetragen wurde, entschieden dahin, dass die Einziehung der amtlich festgesetzten Gebühr im Wege der administrativen Zwangsvollstreckung unzulässig sei und der Ermässigung der Taxe seitens der Fleischbeschauer, welche nicht als Beamte der Polizei, sondern als Gewerbetreibende anzusehen seien, im Wege des Privatabkommens Nichts entgegenstehe.

“Im Amte Zeven wird nicht unerhebliche Schweinezucht betrieben. Finnen gehören nicht zu den Seltenheiten; ein im Bezirke geborenes Schwein war hochgradig trichinös befunden, man beabsichtigte daher, da die Versuche, Fleischbeschauer anzustellen, in 7 Gemeinden an dem Widerstande der Bewohner gescheitert waren, jene Gemeinden benachbarten 4 bis 8 km entfernten Fleischschau-Bezirken anzuschliessen. Gelegentlich einer dadurch veranlassten Beschwerde bestimmte der Herr Minister, dass die Ausdehnung der obligatorischen [p. 122] Fleischbeschau hinsichtlich der zum Privatgebrauche geschlachteten Schweine nur auf solche

Gemeinden in Aussicht zu nehmen sei, in denen der bestellte Fleischbeschauer den Beteiligten ohne allzugrosse Belästigung zugänglich wäre.

“In der Stadt Bremervörde beantragten die vorhandenen 9 Schlachter, um die auf 1 M. festgesetzten Gebühren herabzudrücken,, die Anstellung eines besonderen Fleischbeschauers, welcher jedes von den Schlachtern geschlachtete Schwein für eine Gebühr von 50 Pf. untersuchen sollte. Da die vorhandenen 3 Beschauer dem Bedürfnisse schon reichlich genügten, übrigens die in Aussicht genomme Persönlichkeit für das Amt durchaus ungeeignet war, so wurde der bereits vom Magistrate abgewiesene Antrag auch von der Landdrostei abgelehnt und die Entscheidung in der Ministerialinstanz bestätigt.”—*Bohde, 1887, pp. 120–122.*

“Wegen ungenügender Kenntnisse mussten 20 Fleischbeschauer die Nachprüfungen wiederholen, 9 wurden wegen Unbrauchbarkeit oder grober Pflichtverletzung aus dem Amte entlassen. Wegen Ueberschreitung der zulässigen Zahl von 6 an einem Tage untersuchten Schweine, unordentlicher Listenführung und dergl. wurden mehrfach Bestrafungen erforderlich.

“Allgemein sprechen die Physiker sich für die Nothwendigkeit der Nachprüfungen aus, besonders auch mit Rücksicht auf die Beschaffenheit der Mikroskope, mehrfach bot sich Gelegenheit, die Fleischbeschauer vor der Uebernahme des Amts von dem Ankauf billiger und schlechter Instrumente zurückzuhalten. Der Physikus des Kreises Jork hat die empfehlenswerthe Einrichtung getroffen, dass Personen, die sich als Fleischbeschauer ausbilden lassen wollen, vorher stets seinen Rath wegen Beschaffung eines Mikroskops in Anspruch zu nehmen haben. Er empfiehlt die von Leitz in Wetzlar zum Preise von 45 Mark bezogenen Instrumente als vorzugsweise für den Zweck brauchbar.

“Unter Hinweisung auf die Belästigungen und Kosten, welche für die Fleischbeschauer und das Publikum dadurch entstehen, dass die Nachprüfungen der Fleischbeschauer am Wohnsitze des Kreisphysikus abgehalten werden und hierdurch einzelne Fleischbeschauer zu mehrtägigen Reisen genöthigt werden, beantragte ein Physikus die Erlaubniss, die Nachprüfungen ausser an seinem Wohnsitze auch an bestimmten anderen Orten des Kreises abhalten zu dürfen. Von dem Herrn Minister wurde das Gesuch abschlägig beschieden, weil eine Behinderung der Fleischschau nicht zu befürchten sei, wenn die Nachprüfungen nicht während der Schlachperiode vorgenommen würden und weil zu einer Ausnahme von der Regel, dass der zu Prüfende den Kreisphysikus aufzusuchen habe, Veranlassung nicht vorliege.

“Während des Berichtszeitraums sind fünf Schweine trichinös befunden, zwei derselben waren in Verden von Ackerbürgern in Ställen aufgezogen worden, aus denen auch im Jahre 1885 drei trichinöse Schweine hervorgegangen waren. Ein in Ottersberg, Kreis Achim, geschlachtetes Schwein, welches krankhafte Erscheinungen gezeigt hatte, war in einem benachbarten Moordorfe aufgezogen worden, trotz sorgfältiger Untersuchung wurden bei den übrigen Thieren, welche mit dem kranken dieselben Ställe bewohnt hatten, Trichinen nicht gefunden.

“Die Befunde der Fleischbeschauer wurden von dem zuständigen Kreisphysikus bestätigt, in einem Falle lag eine Verwechselung von [p. 129] lebhaft sich bewegenden Nematoden mit Trichinen vor; auf welche Weise die Würmer in das Fleisch gelangt waren, liess sich nicht feststellen.”—*Bohde, 1890, pp. 128–129.*

“Die Ergebnisse der Nachprüfungen, deren vortheilhafter Einfluss auf die Zuverlässigkeit der Untersuchungen besonders anerkannt wird, sind im Allgemeinen befriedigend ausgefallen. Wegen ungenügender Kenntnisse mussten in jedem Jahre 3 bis 7 Fleischbeschauer die Prüfung wiederholen, 6 wurden wegen Unbrauchbarkeit entlassen, oder legten das Amt freiwillig nieder. Wegen unordentlicher Führung der Listen über ihre Thätigkeit und wegen Ueberschreitung der zulässigen Zahl von 6 an einem Tage untersuchten Schweine erfolgten einige Bestrafungen. Gegen einen Fleischbeschauer in Geestemünde wurde eine Polizeistrafe von

30 M. festgesetzt, weil er $\frac{1}{2}$ Jahr lang die Führung der Listen unterlassen hatte. Die hiergegen angerufene Entscheidung des Schöffengerichts fiel gegen ihn aus, während die Strafkammer des Landgerichts in Verden ihn freisprach.

“Die Beschaffenheit der Mikroskope der Fleischbeschauer gab mehrfach zu Ausstellungen Anlass, sowohl die Instandhaltung an sich brauchbarer, als auch die Benutzung billiger und schlecht [p. 145] eingerichteter Instrumente. Bei der geringen Vergütung, die manche Fleischbeschauer trotz der amtlich festgesetzten, angemessenen Taxen für die Untersuchungen erhalten, erklärten sich dieselben mehrfach ausser Stande, bessere Mikroskope aus eigenen Mitteln anzuschaffen. Nur ausnahmsweise lässt die Gemeinde sich zu eine Beihülfe für solchen Zweck herbei, es wird daher erklärlich, wenn manchmal die Anforderungen an die Brauchbarkeit der Mikroskope bei den Nachprüfungen niedrig gestellt werden.”—*Bohde, 1893, pp. 144, 145.*

“Ungeachtet der fortwährend darauf gerichteten Bemühungen ist es noch immer nicht gelungen die Polizeiverordnung vom 12. December 1877 (vergl. 4. Generalbericht) betreffend die Untersuchung des Schweinefleisches auf Trichinen und Finnen, in allen Gemeinden zur Durchführung zu bringen. Im Geestkreise Bremervörde, besonders aber im Nachbarkreise [p. 129] Zeven wussten sich einzelne Gemeinden bisher der Massregel zu entziehen. Im Kreise Zeven haben die fortgesetzten Bemühungen des Kreisphysikus und des Landraths endlich den Erfolg gehabt, dass bis zum Ende des Jahres 1894 im Kreise 18 Fleischbeschauer angestellt waren. Mehrfach wurden Gemeinden, in denen für das Amt geeignete Personen angeblich nicht zu finden waren, benachbarten Schaubezirken angeschlossen. In manchen Orten wird der Mangel an geeigneten Fleischbeschauern anscheinend durch die geringen Gebühren verursacht, die den Beschauern zugebilligt sind. In der That muss das immerhin verantwortungsvolle Amt wenig verlockend erscheinen, wenn der Fleischbeschauer für die Untersuchung eines Schweines 50 Pfg. erhält und dafür auch noch Entfernungen bis zu mehreren Kilometern zurückzulegen hat.

“Im Jahre 1892 wurden unter amerikanischen Speckseiten, die mit der in der Kaiserlichen Verordnung vom 3. September 1891 vorgeschriebenen amtlichen Bescheinigung über die stattgehabte Untersuchung versehen waren, in 3 Fällen Trichinen gefunden. Der Umstand gab Veranlassung, die Bestimmung im § 2 der oben genannten Polizeiverordnung in Erinnerung zu bringen mit *Hinweisung darauf, dass der amtliche Nachweis der amerikanischen Behörden über die Unschädlichkeit der Fleischwaaren nur die Erlaubniss zur Einfuhr derselben bedinge.*¹ * * *

“Eine Fleischbeschauerin in Verden fand lebende Würmer, welche sie für Trichinen hielt, in den Augenmuskeln eines Schweines, aber nicht in anderen Muskeln desselben Thieres. Der Kreisphysikus hielt die Würmer nicht für Trichinen, obwohl sie mit solchen grosse Aehnlichkeit hatten, und veranlasste eine Nachprüfung in der Königlichen thierärztlichen Hochschule in Hannover. Hier stellte Professor Bötcher fest, dass es sich um Rhabditiden handelte, von der sehr schwierigen Bestimmung der Species sah derselbe ab. Aus der Literatur war ihm kein Fall bekannt, dass Rabbiditen² in den Augenmuskeln des Schweines beobachtet seien.”—*Rusak, 1897, pp. 128, 129.*

That a district which appears never to have reported a case of trichinosis in man should be subjected to all the trouble and worry mentioned in these extracts can hardly fail to give rise to serious reflections among hygienists as to the justification of compelling the expenditure of so much money and effort in enforcing upon the

¹ Italics not in the original. See above, p. 17.

² These worms were probably introduced into the preparation by the water used. Several such cases are known.—C. W. S.

unwilling inhabitants a hygienic measure which is admittedly an uncertain protection against the disease it is intended to prevent.

Stettin 18 cases, 0 death.

No district reports are accessible for the years 1895-1898. No cases have been found for the years 1882 (Weiss, 1884); 1883-1884 (Dieterich, 1887, p. 137); 1886-1890, 1892-1894 (Katerbau, 1890, p. 109; 1893, p. 94; 1896, p. 108). The following cases have been collected:

1881, 4 cases, 0 death. Apparently due to inspected meat.

1885, 5 cases, 0 death. Probably due to condemned meat.

1891, 8 cases, 0 death. Source known. Details regarding inspection not given.

1898, 1 case, 0 death. Details not given.

Thus 13 cases were recorded for the nine years of exclusion, and 1 case for the seven years since the readmission of American pork.

Stralsund 4 cases, 1 death.

No Bezirk health reports are accessible for the years 1895-1898. No cases have been found for the years 1881 (Koehler, 1883); 1883-1885 (Koehler, 1887, p. 85); 1889-1891 (Haselberg, 1894); 1892-1894 (Haselberg, 1898). The only statistics found are:

1882, 3 cases, 1 death. Due to uninspected meat.

1886-1888, 1 case, 0 death. Details lacking.

Trier 0 case, 0 death.

Official Bezirk reports for 1895-1898 are not accessible. No cases of trichinosis have been found for the years 1881-1898.

Trichina inspection was required for American and other imported wares by a police order of February 26, 1879, but this order was afterwards repealed. On April 23, 1891, a new decree was issued providing for a general trichina inspection, but this was not received with any amount of enthusiasm. It was modified October 8, 1881, freeing house slaughtering, when the meat was intended for use in one's own family, from the inspection. Schwartz (1887, p. 68) refers to the continued opposition raised against the trichina inspection, and states that the Government thought it necessary upon repeated occasions to warn the public against eating raw pork, even when it had been microscopically inspected. In 1894 (pp. 41, 54) Schwartz states that no reexamination of the microscopists and no inspection of the instruments take place because of the expense connected with such revision.

Large quantities of American meats have been consumed in this Bezirk, and Schwartz (1882, pp. 85, 86) admits the claim of the importers in Saarbrücken that the mountain inhabitants and factory hands were able to procure their necessary meat only when American pork was imported. The following quotations from official sanitary reports will be found interesting:

"Angeregt durch die Circular-Erlasse des Königlichen Ministeriums zur Einführung der Untersuchung des Schweinefleisches auf Trichinen war von der Königlichen

Regierung zu Trier am 26. Februar 1879 für den Umfang des Bezirks eine Polizei-Verordnung erlassen worden, welche die [p. 86] Untersuchung des amerikanischen oder des sonst vom Auslande importirten Schweinefleisches und Speckes auf Trichinen und Finnen anordnete, von der des inländischen aber ganz absah. In den meisten Städten kam dieselbe zur Ausführung und wurden im Regierungsbezirke im Jahre 1879–4741 Schweine und Theile von Fleischtheilen untersucht. Es ergab die Untersuchung im Kreise Daun ein trichinöses geschlachtetes Schwein, in den übrigen Kreisen 132 trichinöse amerikanische Schinken und Speckseiten. Sieben Schweine hatten Finnen. Für das Jahr 1880 fehlt eine zuverlässige Angabe.

“In den Städten St. Johann und Saarbrücken stiess dagegen die Einführung der mikroskopischen Untersuchung auf Schwierigkeiten. Mehrere dort ansässige Grosshändler, welche bisher in grösseren Quantitäten amerikanisches Fleisch eingeführt hatten, fanden sich in ihrem Handel durch diese Polizeiverordnung geschädigt und protestirten gegen dieselbe. Ihre Beschwerde wurde von der Handelskammer zu Saarbrücken untertützt. Sie behaupteten wohl nicht mit Unrecht, dass die Bergleute, Hütten- und Fabrikarbeiter, für welche Fleischnahrung ein unabweisbares Bedürfniss sei, erst durch die Einführung des amerikanischen Schweinefleisches und vorzüglich des Speckes wieder in die Lage gekommen seien, eine solche sich verschaffen zu können. Sie führten weiter aus, dass es für sie als Grosshändler ganz unmöglich sei, bei einem Importe von rund 30,000 Centner Schweinefleisch, welcher in ungefähr 142,000 Stücken meist in der Zeit vom März bis September ankomme, jedes Stück untersuchen und mit dem Brennstempel des Fleischbeschauers vor dem Verkaufe versehen zu lassen. Diese Unmöglichkeit verlange aber die angezogene Polizei-Verordnung. Durch dieselbe, behaupteten sie ferner, wurde in kurzer Zeit ihr Handel mit amerikanischen Schweinefleische vernichtet werden, weil sie die weitere Concurrenz dann nicht mehr aushalten könnten. In Folge dieser Vorstellung ordnete der Herr Minister denn auch die Aufhebung jener Regierungs-Verordnung, soweit sie die Grosshändler betraf, an und empfahl die Einführung der Untersuchung des sämmtlichen Schweinefleisches für den Detailhandel. Die obige Polizei-Verordnung wurde deshalb von der königlichen Regierung unter dem 26. Februar 1880 zurückgezogen und gleichzeitig das Publikum vor dem Genusse des nicht vollkommen gar gekochten, des nicht gut gepökelten und geräucherten Schweinefleisches gewarnt.” — *Schwartz, 1882, pp. 85, 86.*

“Von einschneidender Wirkung auf den Fleischhandel war die unter dem 23. April 1881 von der Königlichen Regierung angeordnete, obligatorische Untersuchung aller im Bezirke, auch für den Hausbedarf geschlachteten Schweine, wie des von auswärts importirten Schweinefleisches und der daraus verfertigten Fleischwaaren, soweit diese nicht den Beweis der vorhergegangenen amtlichen Untersuchungen beibringen konnten, auf Trichinen und Finnen. Die bezügliche Polizeiverordnung wurde mit der Massgabe erlassen, dass sie in jedem Orte dann in Kraft treten solle, wenn für denselben eine dem Bedürfnisse entsprechende Zahl von Fleischbeschauern vorhanden, bekannt gemacht und verpflichtet sei. Im Uebrigen enthielt sie die gewöhnlichen Bestimmungen und verordnete in der hierzu erlassenen Instruktion noch, dass der Fleischbeschauer, welcher für jede Untersuchung eine Mark zu fordern habe, an einem Tage nicht mehr als 10 Schweine untersuchen solle. Die Aussicht auf einen immerhin ganz lohnenden Verdienst bewog alsbald viele Personen in den Städten und auf dem Lande sich als Fleischbeschauer ausbilden und examiniren zu lassen. Dass auch Lehrer als Fleischbeschauer angestellt würden, gab die Königliche Regierung desshalb nicht zu, weil jene durch dieses Nebenanamt ihren Berufsgeschäften entzogen und mit der Bevölkerung in Konflikt gesetzt werden könnten. Auf sie [p. 33] zurückzugreifen war auch nicht nöthig, da bald in dem grösseren Theile aller Kreise eine genügende Zahl anderweitiger Personen als Fleischbeschauer bestellt werden, und die Fleischschau zur Ausführung kommen konnte. Die Konkurrenz wurde sogar schon nach einiger Zeit so gross dass die einzelnen Fleischbeschauer

in ihren Forderungen unter die Taxe gingen, und mehrere Gemeinden sich versucht fühlten, dem Mindestfordernden die Fleischschau, welche sie in öffentlicher Versteigerung ausboten, zuzuschlagen. Hiergegen legte jedoch die Königliche Regierung Protest ein und untersagte diese Art von Versteigerung.

“Nirgends im Bezirke wurde die obligatorische Fleischschau von vornherein mit grossem Enthusiasmus aufgenommen, und bald erhob sich eine weit verbreitete Agitation gegen dieselbe, welche zunächst die Bestimmung, dass auch jedes für den Hausbedarf geschlachtete Schwein untersucht werden musste, zum Gegenstand des Angriffs machte. Von allen Seiten, vorzüglich aber von dem Lande aus, beschwerte man sich über das Drückende dieser Verordnung sowohl bei der Königlichen Regierung als bei dem Herrn Minister und legte Nachdruck darauf, dass bei der auf dem Lande oft nicht zu umgehenden grösseren Entfernung des Wohnsitzes des Fleischschauers das Schlachten der Schweine überhaupt erschwert, sogar in der allgemeinen Schlachtzeit unmöglich gemacht werde, und dass die Zahlung von einer Mark für die Fleischschau das Schweinefleisch unverhältnissmässig vertheuere. Man führte ferner an, dass unter dieser Vertheuerung natürlich zumeist der arme Mann, welchem es oft sehr schwer falle das zum Einsalzen nöthige Salz zu beschaffen, leide und der Preis von 1 Mark für die ortsüblicherweise geschlachteten Spanferkel, welche durchschnittlich nur einen Werth von zwei bis drei Mark hätten, ein so unverhältnissmässig hoher sei, dass diese von dem Handelsmarkte ganz ausgeschlossen würden. Als Beispiel für die Höhe und das Drückende dieser unfreiwilligen Abgabe wurde der Kreis Saarbürg angeführt. In diesem werden jährlich annähernd 2,500 Schweine geschlachtet, so dass die Fleischschaukosten 2,500 Mark betragen, eine Summe, welche der Hälfte der Klassensteuer gleichkommt. Endlich wurde behauptet, dass die Untersuchung, wenigstens auf dem Lande, wo niemals rohes Schweinefleisch gegessen werde, ganz unnöthig sei, keineswegs einen absoluten Schutz gewähre und die Schweinezucht, einen bisher blühenden Zweig der Landwirthschaft, äusserst gefährde. Alle Eingaben gingen zunächst darauf hinaus, dass wenigstens das Schlachten für das eigene Haus und den eigenen Gebrauch frei gegeben werde.

“In Folge der vielfachen Gesuche und Vorstellungen wurde unter dem 8. October 1881, den Ortspolizeibehörden seitens der Königlichen Regierung die Ermächtigung ertheilt, von der Fleischschau der zum eigenen Bedarfe geschlachteten Schweine abzusehen, dieselbe aber unbedingt für alles zum Verkauf gestellte Schweinefleisch festzuhalten. Mit diesem Freigeben eines grossen Theils aller geschlachteten Schweine war nun wieder den schon angestellten Fleischschauern gar nicht gedient und am allerwenigsten denen auf dem Lande, wo durchgängig nur für den Hausbedarf geschlachtet wird. Sie erlitten einen sehr grossen Ausfall in ihren Einnahmen und einzelne [p. 34] Beschauer in den Dörfern hatten überhaupt keine Untersuchung mehr zu machen. In ihrer Noth wandten sie sich an die Königliche Regierung und baten diese sie für den entstandenen Ausfall schadlos zu halten, ihnen die Kosten des Unterrichts, des Examens, des Mikroskops, 2c., zu ersetzen, da sie in gutem Glauben auf das Weiterbestehen der ersten Polizeiverordnung sich die vielen Kosten und Mühen gemacht hätten. Hierzu sah sich die Regierung um so weniger veranlasst, als sie keine Garantie der Einkünfte übernommen hatte, das Grundprinzip der Fleischschau bestehen blieb, und auch den für den eigenen Bedarf Schlachtenden die Gelegenheit zur Untersuchung gegeben sein sollte. Auch die weiterhin an den Herrn Ressortminister gerichteten Beschwerden wurden hiernach zurückgewiesen.”—Schwartz, 1884, pp. 32–34.

Wiesbaden 3 cases, 0 death.

Official district health reports are not accessible for the years 1895–1898. No cases have been found for the years 1881–1888 (Wagner, 1882; 1883, p. 39; 1886; 18—, p. 76); 1889–1891 (Pfeiffer, 1894, p. 36);

1892-1894 (Pfeiffer, 1897, p. 24); 1895-1896, 1898. The only cases collected are:

1893, 2 cases, 0 death. No details.

1897, 1 case, 0 death. In hospital. No details.

B. KINGDOM OF SAXONY.

1860 to 1880: 2,610 cases, 52 deaths. Annual average, 127.28 cases, 2.95 deaths.

1881 to 1898: 1,634 cases, 76 deaths. Annual average, 86 cases, 4 deaths.

The statistics for Saxony are much more complete than those for any other State in Germany, owing to the careful preparation of the annual health report (*Jahresbericht*) since 18—.

Ostertag (1899, p. 488) quotes Johnne as authority for the statement that Saxony experienced 3,402 cases, 79 deaths, of trichinosis during the 30 years 1860 to 1889, giving an annual average of 79.6 cases, 1.18 deaths, per year. A summary for the 21 years, 1860-1880, which I made several years ago showed 2,610 cases, 52 deaths, an average of 127.28 cases, 2.95 deaths, per year. These figures do not agree exactly with the official statistics.

The following extracts from reports for years prior to 1881 are both interesting and instructive:

"In andern dagegen, welche in Gittersee nur 8 Personen betraf, starben, wie gesagt, 4 derselben. Hier war es ein im Hause gemästetes und geschlachtetes Schwein, von welchem diese Personen am Schlachttag selbst (9. April) Wellfleisch und frische Wurst gegessen hatten. Der Vater und drei erwachsene Kinder starben. Als bald nach dem Bekanntwerden dieser Krankheiten hatte der Bezirksarzt Dr. Lehmann sämtliches noch vorhandene Fleisch mit Beschlag belegen lassen, später aber auf Bitten der Wittwe in der Hoffnung, dass letztere durch die gemachten traurigen Erfahrungen hinreichend belehrt sein würde, unter der Bedingung wieder freigegeben, dass nichts davon an dritte Personen abgegeben und alles nur gehörig gekocht genossen werde. Trotzdem ergab sich später, dass diese Frau einen Schinken des Schweines an einen Fleischer in Dresden verkauft hatte, da derselbe, bei der mikroskopischen Untersuchung trichinös gefunden, zu weitem Erörterungen Anlass gegeben hatte. Ein unnachsichtliches Vorgehen in ähnlichen Fällen hat sich der Bezirksarzt natürlich nach dieser Erfahrung zum Gesetz gemacht."—*Reinhardt, 1878, VIII, Jahresbericht (for 1876), p. 47.*

"In Leipzig herrschte im October und November eine sehr verbreitete Epidemie. Es wurden etwa 184 Erkrankungen gezählt, von denen 2 tödtlich endeten. Letztere betrafen einen Professor und einen Kaufmann. Die Ursache wurde in aus Braunschweig bezogenen Mettwurst gefunden. Die in dieser Stadt seit lange bestehende Trichinenschau hatte somit die Erkrankungen nicht verhüten können. Zu gleicher Zeit waren auch an andern Orten durch aus derselben Quelle bezogene Wurst Trichinenerkrankungen in Mehrzahl aufgetreten, so namentlich in Höxter in Westfalen."—*Reinhardt, 1879, IX. Jahresbericht (1877), p. 36.*

¹ "As proof of the small amount of confidence to be attached to the microscopic

¹ "Als Beleg für die geringe Zuverlässigkeit der mikroskopischen Trichinenschau haben wiederum mehr Bezirksärzte von Fällen zu berichten wo sie oder andre geübte Mikroskopiker erst nach dem Durchsuchen von 30 oder 40 Präparaten eine

examination for trichinae, several Bezirk physicians have again reported cases where they or other practiced microscopists have not been able to find the parasites until they had examined thirty or forty preparations, when the first inspector found numerous trichinae present. This irregular distribution of the worms which frequently occurs and which renders it possible to overlook them, lessens the value of the microscopic inspection, and shows that thorough cooking of the meat, which is happily very common, is a better guarantee of its wholesomeness.

1 * * * "Among these cases it again occurred that in one hog only one trichina was found by several examiners, in spite of all care * * *".—*Reinhard, 1881, p. 44.*

In Glauchau most of the butchers agreed to the trichina inspection, and displayed signs to this effect in their shops. An investigation showed, however, that not an inconsiderable number of hogs were not inspected. In Leipzig one trichina was found in a slaughtered hog; 600 further preparations from the same animal failed to reveal a second specimen.²

Trichine finden konnten in einem Fleische, wo vorher der erste Untersucher zahlreiche gefunden hatte. Eben die häufig so ungleichmässige, nesterweise [p. 49] Vertheilung der Trichinen, die so leicht ein Uebersehen derselben ermöglicht, schmälert die Vertrauenswürdigkeit der Resultate der mikroskopischen Untersuchung und giebt das glücklicher Weise noch sehr verbreitete Garkochen des Fleisches eine bessere Garantie für die Unschädlichkeit desselben."—*Reinhard, 1880, X. Jahresbericht (1878); pp. 48, 49.*

1 "Nach den bezirksärztlichen Berichten sind im Ganzen durch die Trichinenschauer 54 Schweine als trichinig ermittelt worden, darunter kam es wieder einmal vor, dass in einem Schweine von mehreren Untersuchern nur eine einzige Trichine trotz aller Sorgfalt gefunden wurde. Besonders bemerkenswerth ist die in Dresden gemachte Beobachtung, wo zum ersten Male lebende Schweine aus Amerika dem Schlachthofe zugeführt wurden. Von den 88 Stück wurden nicht weniger als 14, das sind 16 per cent trichinig gefunden!"—*Reinhard, 1882, XII. Jahresbericht (1880), p. 44.*

2 "In Glauchau hatten sich die meisten Fleischer zur Trichinenschau vereinigt, und bezügliche Zettel an ihren Verkaufsläden aufgehängt. Eine vorgenommene Revision ergab aber, dass ein nicht [p. 55] unbedeutender Theil der Schweine nicht untersucht worden war und hatte der Stadtrath dagegen einschreiten müssen.

"Demungeachtet sind vielfach Trichinen in Schlachthieren gefunden und die betreffenden Schweine vor dem Verkaufe unschädlich gemacht worden. So wurden in Bernstadt und in Löbau je zweimal, in Herwigsdorf einmal, in Freiberg ebenfalls zweimal und in Dresden bei einer grössern Anzahl geschlachteter Schweine Trichinen gefunden, hier auch in amerikanischen Schinken und unter diesen elfmal in solchen, welche bereits in Hamburg von den dortigen Trichinenschauern untersucht und amtlich als trichinenfrei bezeichnet worden waren. In Leipzig wurde von geschlachteten Schweinen nur in einen eine unzweifelhafte lebende Muskeltrichine gefunden und vom Bezirksarzte und dem Prof. Zürn als solche controllirt, in 600 weiteren Präparaten aus demselben Thiere war es nicht möglich eine zweite zu entdecken. Trotzdem wurde nur das ausgeschmolzene Fett, nicht aber das Fleisch freigegeben. Ausserdem wurden hier 3 amerikanische Schinken und 3 solche Speckseiten, ferner in Chemnitz eine, in Zwickau 3 Speckseiten und 4 geschlachtete Schweine, 6 solche auch im Medicinalbezirke Plauen trichinenhaltig gefunden."—*Reinhard, 1881, XI. Jahresbericht (1879), pp. 54, 55.*

1881 to 1898.

Passing now to the years 1881-1898, the following statistics have been gathered. No cases have been found for the years 1892, 1893, 1896.

The outbreaks collected give a total of 1,634 cases, 76 deaths, of which it has been alleged that one case in Chemnitz (p. 134) was due to American bacon eaten on a voyage from America to Europe. The average for the 19 years is 86 cases, 4 deaths, a decrease of 41.28 cases and an increase of 1.05 deaths, when compared with the average for 1860-1880. During the exclusion of American pork (1883-1891) 1,255 cases, 76 deaths, occurred, giving an annual average of 139.4 cases, 8.3 deaths. Since its readmission (1892-1898) under certificate, 42 cases, 0 death, have occurred, an annual average of 6 cases, 0 death, thus showing a decrease of 133.4 cases, 8 deaths, per year. Under these circumstances it can not be claimed that American pork has *increased* the number of cases.

Arranging the cases according to the source of infection, the following table is obtained:

Summary of Saxon outbreaks, 1881-1898.

1881-1882.		1883-1891.		1892-1898.		1881-1898.	
Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
337	1	1,255	75	42	.....	1,634	a 76
.....	.....	178	5	1	.....	179	b 5
11	.....	288	1	5	.....	304	c 1
[11	]	[466	6]	[6	]	[483	d 6]
.....	.....	25	.....	.....	.....	25	e
142	.....	286	39	30	.....	458	f 39
173	1	471	30	3	.....	647	g 31
10	.....	1	.....	.....	.....	11	(h)
.....	.....	6	.....	3	.....	9	(i)
1	.....	.....	.....	.....	.....	1	(j)

a Totals, divided as follows:

b Due to meat which, it would appear, was inspected and passed as free from trichinae.

c Due to other defects in the inspection system.*

* Meat was eaten before result of inspection was known; or meat was inspected but inspector suppressed the results of inspection; or meat stamped as free from trichinae before inspection was ended; or buried hog (inspected?) was dug up and eaten; or meat was marked in the book as free from trichinae; or meat appears to have been smuggled away from the inspection.

d Total cases and deaths which may be attributed to faults of the inspection.

e Additional cases due to meat which may or may not have been inspected.

f Definitely stated that the meat was not inspected, hence source known.

g Source of infection known, but details regarding inspection not given.

h Definitely stated that source of infection was not known or could not be traced.

i No data given regarding meat or data insufficient to classify.

j Alleged to have been due to American meat eaten on voyage from America to Germany, but data incomplete.

With the record shown in the above table before us, it is difficult to see any sanitary justification in the Saxon health statistics for the attacks made by Saxon papers upon our goods.

1881: 177 cases, 1 death.

Summary for the year.—Total of 177 cases, 1 death. Of these, 11 cases occurred from eating pork before it was inspected; 1 case is alleged to have resulted from eating American pork during the passage from America to Germany, but complete evidence is lacking; 102 cases arose from uninspected pork.

Chemnitz 1 case, 0 death.

Reinhard, 1883, p. 48: It is alleged that the patient ate American pork on board ship from America to Germany, and became sick in Chemnitz. See p. 167 of present report.

Dresden 11 cases, 0 death.

Reinhard, 1883, p. 28: Raw ham eaten before inspection was reported.

Lindenau bei Leipzig, September 60 cases, 0 death.

Reinhard, 1883, p. 48: Hog was not inspected. "Der betreffende Fleischer hatte zwar bekannt gemacht, dass bei ihm *alle* Schweine auf Trichinen untersucht würden, doch auf erfolgte Anzeige lehnte der Staatsanwalt die Untersuchung ab." One death, but not due to trichinosis.

Neukirchen and vicinity bei Chemnitz 63 cases, 1 death.

Reinhard, 1883, pp. 48, 49: Source of hog known. No details regarding inspection.

Oberloschwitz bei Dresden 2 cases, 0 death.

Reinhard, 1883, pp. 47, 48: Same source as Spitzkunnersdorf.

Spitzkunnersdorf bei Zittau 40 cases, 0 death.

Reinhard, 1883, pp. 47, 48: Trichinæ found. Hog had not been inspected.

1882: 160 cases, 0 death.

Summary for the year.—Total of 160 cases, 0 death. None of these cases were alleged to be due to American pork. It is not definitely stated whether any cases were due to inspected meat.

"Von dem Vereine amtlich verpflichteter Trichinenschauer in Dresden wurde beim Landes-Medicinal-Collegium die Einführung der obligatorischen Trichinenschau beantragt und dies hauptsächlich durch ihre misslichen Erwerbsverhältnisse begründet. Da sie indess u. A. angaben, dass hier in Dresden oft 60–80, ja 100 Schweine in einem Tage von einem Trichinenschauer untersucht würden und dies unmöglich in gewissenhafter Weise geschehen könne, setzte das Collegium das kgl. Ministerium unter Bezugnahme auf das von ihm bearbeitete Normalregulativ hiervon in Kenntniss und sind auch die Verwaltungsbehörden hierauf angewiesen worden."—*Reinhard, 1884, XIV Jahresbericht (1882), p. 56.*

Carlsfeld (Schwarzenberg), March 50 cases, 0 death.

Reinhard, 1884, p. 52: Not stated whether the hog was inspected or not. Source known.

Dresden, June and December 20 cases, 0 death.

Reinhard, 1884, pp. 51, 52: First outbreak caused by a ham brought from the country. Source of infection in second outbreak not determined.

Scheibenberg and vicinity, May 50 cases, 0 death.

Reinhard, 1884, p. 52: Trichinæ found. Not stated whether hog was inspected. Source known.

Thum (Annaberg), January----- 40 cases, 0 death.

Reinhard, 1884, p. 52: Meat not inspected, although an inspector was stationed in Thum.

1883: 155 cases, 5 deaths.

Summary for the year.—Total of 155 cases, 5 deaths. Of these, 105 cases, 5 deaths, were due to pork which had been inspected and passed as free from trichinæ. No cases were alleged to have been due to American pork. The decree excluding American pork was issued March 6, 1883.

Kirschberg, Med.-Bez. Zwickau, April----- 105 cases, 5 deaths.

Reinhard, 1885, pp. 50, 51: *Hog had been inspected and passed as free from trichinæ.*

Reichenau, Med.-Bez. Zittau, February----- 50 cases, 0 death.

Reinhard, 1885, pp. 50, 51: Infection probably from a meat shop in Reichenau, from which all had purchased meat.

1884: 73 cases, 2 deaths.

Summary for the year.—More than 73 cases, 2 deaths. Of these, 32 cases were due to pork which had been inspected and passed as free from trichinæ; about 3 cases, 1 death, were due to pork which the trichina inspector had smuggled away from the inspection.

Chemnitz----- 1 case, 0 death.

Reinhard, 1886, p. 42: Source of infection not known.

Grossedlitz bei Pirma----- 3 cases, 1 death.

Reinhard, 1886, p. 42: “* * * eines wahrscheinlich der Untersuchung durch den Trichinenschauer entzogenen Schweines * * *.” Probably the trichina inspector had smuggled the hog away from the inspection. “Several” cases.

Plaue i. V., August----- About 30 cases, 0 death.

Reinhard, 1886, pp. 42, 43: Probable source of infection known; nothing said regarding inspection.

Rodewisch bei Auerbach----- More than 32 cases, 0 death.

Reinhard, 1886, p. 43: *The hog was inspected and passed as free from trichinæ.* “Die Infection war von einem stark trichinigen Schweine ausgegangen, das zwar einem Trichinenschauer zur Untersuchung vorgelegen hatte, in welchem er aber keine Trichinen gesehen hatte, da er bei der Untersuchung mit grosser Unkenntniss und Nachlässigkeit verfahren war.”

Volkmarsdorf bei Leipzig----- 7 cases, 1 death.

Reinhard, 1886, pp. 42, 43: Patient died in Leipzig at Jacob Hospital. Source of meat known. Nothing said regarding inspection.

1885: 154 cases, 7 deaths.

Summary for the year.—About 154 cases, 7 deaths. Of these, 11 cases resulted from meat which was smuggled through the inspection. One case due to eating meat before the results of the inspection were known.

“Die Trichinenschau ist zwar in vielen Orten theils obligatorisch für alle im Orte geschlachteten Schweine oder nur facultativ eingeführt, doch hatten mehrfache

Erfahrungen gezeigt, dass diese Untersuchungen keineswegs überall mit der den Zwecke entsprechenden Sorgfalt ausgeführt werden. So ergab es sich theils, dass die angestellten Trichinenschauer entweder die erforderliche Vertrautheit mit der Untersuchungsmethode oder mit den Eigenschaften der Trichinen nicht oder nicht mehr besaßen, oder ihre Mikroskope schlecht gehalten und unbrauchbar geworden waren, theils hatten die Gemeinden selbst unter Vernachlässigung der in dem vom k. Ministerium herausgegebenen Normalregulativ empfohlenen Vorschriften Regulativ aufgestellt, welche den Werth der Trichinenschau völlig illusorisch machten. Im Auftrage des Ministeriums hat daher das Landes-Medicinal-Collegium das frühere Normalregulativ umgearbeitet und ist dabei zugleich empfohlen worden, eine regelmässige Beaufsichtigung der Trichinenschauer anzuordnen, wobei namentlich der gute Zustand der zu den Untersuchungen bestimmten Mikroskope zu ermitteln und festzustellen ist, ob die Trichinenschauer die für ihre Function nothwendigen Kenntnisse und Fertigkeiten noch besitzen. Das k. Ministerium hat auch durch die Verordnung vom 9. November 1885 dem entsprechend verfügt und zugleich die Bezirksthierärzte ermächtigt, auf Ansuchen der Gemeindebehörden, die Beaufsichtigung der Trichinenschauer zu übernehmen. Zugleich ist den Gemeindebehörden die möglichst unveränderte Annahme des Normalregulativs, namentlich in seinen wesentlichen Bestimmungen, nicht minder auch die Vernehmung mit dem Bezirksärzte über die zu unterlassenden Vorschriften empfohlen worden."—*Reinhard, 1887, XVII Jahresbericht (1885), p. 49.*

Beiesdorf and Neulaube, August 10 ? cases, 0 death.

Reinhard, 1887, pp. 44, 45: A small epidemic. Source known. Nothing said regarding inspection.

Cunewalde More than 60 cases, 0 death.

Reinhard, 1887, pp. 44, 45: Med.-Bez. Löbau; from "Raucherwürstchen." Source known. Nothing said regarding inspection.

Ehrenfriedensdorf 22 cases, 0 death.

Reinhard, 1887, pp. 44, 45: Trichinæ found in a piece of meat. Source traced to meat from a certain butcher shop. Nothing said regarding inspection. Med.-Bez. Annaberg.

Leipzig 1 case, 0 death.

Reinhard, 1887, pp. 44, 45: Meat eaten before inspector reported. Rest of meat destroyed.

Löbau bei Dresden, November 44 cases, 5 deaths.

Reinhard, 1887, p. 44: Hog was not inspected. Raw ham. Two of these cases were in Dresden. Trichinæ found.—Veröff., 1887, p. 579.

Markneukirchen 3 cases, 0 death.

Reinhard, 1887, pp. 44, 45: Epidemic. Source known. Nothing said regarding inspection. Med.-Bez. Oelsnitz.

Pausa 11 cases, 0 death.

Reinhard, 1887, pp. 44, 45: Hog was secretly smuggled away from the inspection.

"* * * war das Schwein der Untersuchung heimlicher Weise entzogen worden * * *." Med.-Bez. Plauen.

Zittau, December More than 3 cases, 2 deaths.

Reinhard, 1887, p. 44: Sausage from Pommern. Several other cases. Trichinæ afterwards found. Nothing said regarding inspection.

1886: 47 cases, 1 death.

Summary for the year.—At least 47 cases, 1 death. Of these, 25 cases resulted from eating pork which should have been inspected, but

was evidently not inspected.—Veröff., 1898, XXII (33), August 17, p. 688: Twenty-five cases of trichinosis in hospitals between 1886–1895.

Alteibau, September More than 25 cases, 0 death.

Zeitschr. f. Fleischbeschau u. Fleischprod., 1886, II (1), October, p. 9: "In Eibau und dessen nächster Umgebung erkrankten ca. 40 Personen an der Trichinosis, doch hat die Krankheit bisher noch einen verhältnissmässig günstigen Verlauf genommen."—Reinhard, 1888, p. 38: One and one-half hogs were used. The hog was inspected, but the half was not. Inspection exists here.

Alt-Waldenburg, October–November 19 cases, 0 death.

Reinhard, 1888, p. 38: Med.-Bez. Glauchau. Source of infection known. Nothing said regarding inspection, but probably not inspected, as host was imprisoned.

Buckersdorf 1 case, 0 death.

Reinhard, 1888, p. 38: Details not given. Number of cases not given.

Ottendorf 1 case, 0 death.

Reinhard, 1888, p. 38: Details not given. Number of cases not given.

Ringenhain 1 case, 1 death.

Reinhard, 1888, p. 38: Ate sausage at Neustadt bei St. At least one fatal case. Med.-Bez. Bautzen. Source apparently known. Nothing said about inspection.

Zwickau (Landgericht) [19 cases, 0 death].

Veröff., 1891, p. 64*: 19 cases. Hog not inspected. Landgericht Zwickau. Schankwirth K., imprisoned fourteen days. Probably this is the same outbreak as Alt-Waldenburg, 1886.

1887: 234 cases, 26 deaths.

Summary for the year.—About 234 cases, more than 26 deaths.

Brandis bei Grimma 4 cases, 0 death.

Roth, 1889, p. 65: Details not clear. Source known (?) [mention of "der Hausschlächter"]. Nothing said regarding inspection.

Grimma 8 cases, 0 death.

Roth, 1889, p. 65: Source of infection traced. Nothing said regarding inspection.

Leipzig, see Unterhainsdorf [3 cases, 0 death].

Unterhainsdorf i. V. and vicinity, October 198 cases, 26 deaths.

Roth, 1889, p. 65: 170 cases, 26 deaths. Cervelat sausage. Hog came from Hamburg. Nothing said regarding inspection.—Veröff., 1887, p. 668: 100 cases, 14 deaths.—Veröff., 1888, p. 227: 198 cases, 22 deaths. All from sausage of one restaurant in Unterhainsdorf. German hog from Hamburg. First cases diagnosed as "cholera nostras." Cases distributed as follows: Unterhainsdorf, 65 cases, 12 deaths; Reichenbach, 49 cases; Hauptmannsgrün, 14 cases, 2 deaths; Infersgrün, 14 cases, 5 deaths; Oberhainsdorf, 13 cases, 1 death; Oberreichenbach, 8 cases; Neumarkt, 2 cases, 1 death; Schneidenbach, 1 case, 1 death; Schönbach, 1 case; Mylau, 1 case; Lauter, 1 case; in all, 169 cases, 22 deaths. Besides these, 3 cases in Leipzig (patients had been in Hainsdorf) and 26 cases in Döbeln (soldiers who had eaten sausage from Hainsdorf).—Zeitschr. f. Fleischbeschau u. Fleischprod., 1887, III (3), December, p. 34: 100 cases, 19 deaths.—Idem, 1888, III (5), February, p. 51: 150 cases, 28 deaths.

Vielau bei Zwickau 23 cases, 0 death.

Roth, 1889, p. 65: Med.-Bez. Zwickau. Source of infection traced. Nothing said regarding inspection.

1888: 404 cases, 34 deaths.

Summary for the year.—Total of 404 cases, 34 deaths. Several other doubtful cases.

Geyer bei Annaberg, July 8 cases, 0 death.

Günther, 1890, p. 9: Meat eaten before result of the inspection was known. "In Geyer bei Annaberg hatten Anfang Juli zwei Fleischer gemeinschaftlich ein Schwein geschlachtet und einen Theil des Fleisches vor der Untersuchung verkauft. Als die Untersuchung das Vorhandensein von Trichinen in reichlicher Menge ergeben hatte, haben diejenigen, welche bereits von dem Fleische genossen, an demselben oder am folgenden Tage Brechmittel und Abführmittel erhalten. Ihre Zahl betrug etwa 40. Gegen drei Wochen später sind 8 Personen erkrankt. Ein tödtlicher Ausgang ist nicht vorgekommen."—Veröff., 1891, p. 64*: Inspection required, but part of the hog was sold before examination; 7 cases, 0 death. Possibly this reference belongs here.

Leipzig, March 3 cases, 0 death.

Günther, 1890, p. 99: Hog slaughtered March 4. It is not definitely stated whether the hog was inspected. "In Leipzig erkrankten ein Fleischergehilfe und dessen zwei Brüder, Schulknaben im Alter vom 11 und 13 Jahren, an Trichinose. Sie hatten von einem am 4. März geschlachteten Thiere rohes Fleisch gegessen. Die Erkrankung begann nach 7-9 Tagen, die Genesung erfolgte nach 4-5 wöchentlicher Krankheitsdauer. Im noch vorgefundenen Schinken und Pökelfleische wurden sehr zahlreiche Trichinen gefunden. Der Trichinenschauer hatte ganz nachlässig Buch geführt."

Neudörfel, Oberhohndorf, Planitz, and Schedewitz, April

118 cases, 0 death.

Günther, 1890, p. 99: Bez. Zwickau. Meat from Neudörfel. "In dem Monat April fällt eine Massenerkrankung in der Umgegend von Zwickau. Es erkrankten in den Vororten Neudörfel, Oberhohndorf, Planitz, und Schedewitz 118 Personen an leichter Trichinose. Insbesondere waren Bergleute und deren Familien erkrankt, welche halbgeräucherte Bratwurst oder gepökeltes Schweinefleisch roh verzehrt hatten. Das Fleisch stammte vom Fleischer in Neudörfel, welcher der Lieferant für den Consumverein in Schedewitz war. Es war nicht mehr zu ermitteln, welches von den am 6. und am 10. April geschlachteten beiden Thieren das trichinenhaltige gewesen war. Nur wurde nachgewiesen, dass der Schlächter die Stücke selbst ausgeschnitten und den Eintrag in das Schaubuch 'trichinenfrei' eigenhändig gemacht habe."—*Zeitschr. f. Fleischbeschau u. Fleischprod.*, III (8), May, 1888, p. 96.

Obercunewalde, etc., January 235 cases, 34 deaths.

Obercunewalde, 169 cases; Cunewalde, 22; Lauba, 9; Kleindesha, 8; Löblau, 7; Beyersdorf, 7; Lawalde, 3; Spremberg, 3; Oppach, 2; Altlöbau, 1; Cottmarsdorf, 1; Durrhennersdorf, 1; Neuschöneberg, 1; Grossdehsa, 1. All these cases came from sausage which a butcher had sent out to his patrons as Christmas presents. He claimed that the hog had been examined and passed as free from trichinae, but was unable to produce the certificate. Five hogs slaughtered; 1, 3, and 5 were examined. The trichinous hog was probably the second. Veröff., 1888, p. 227.—Deutsch. M. Z., 1889, p. 84 (after Riedel).—Veröff., 1889, p. 465.—Günther, 1890, pp. 97, 98: Meat was not inspected.—*Zeitschr. f. Fleischbeschau u. Fleischprod.*, 1888, III (5), February, p. 51: Inspector not at fault.

Obersachsenfeld, January 33 cases, 0 death.

Günther, 1890, pp. 98-100: Bz. Schwarzenberg, 33 cases. Source of infection known. Nothing said regarding inspection.—Veröff., 1888, p. 228. About 30 cases, January.—*Zeitschr. f. Fleischbeschau u. Fleischprod.*, 1888, III (5), February, p. 51.

1889: 41 cases, 0 death.

Summary for the year.—Only one outbreak found. This consisted of 41 cases, which were due to meat which had been inspected and passed as free from trichinæ.

The annual sanitary report¹ mentions two cases of inspection which are not without interest. In one case the inspector took specimens for examination, immediately stamped the animal as free from trichinæ, as was his custom, and then went home to make the examination! He left word with the butcher to wait an hour before using the meat, and if any trichinæ were found he would return. Upon finding trichinæ he ran from one inspector to another instead of returning to the butcher. The latter finally heard from another inspector that the meat was trichinous. In the meantime 33 persons had eaten of it. In the second case, an inspector claimed to have found trichinæ in a hog, part of which had already been eaten. Later examination of the preparation showed no trichinæ, but a structure which appeared like a curled muscle fiber.

¹“In Glauchau hatte ein Trichinenschauer, nachdem er die Proben entnommen, vor der mikroskopischen Untersuchung das Schwein gestempelt und war dann fortgegangen, um die mikroskopische Untersuchung zu Hause vorzunehmen. Er hatte dies stets so gemacht, auch bei dem Schlächter hinterlassen, sie sollten wegen des Fleischverkaufes eine Stunde warten; wenn er etwas [p. 100] fände, würde er wiederkommen. Im vorliegenden Falle fand er nun auch Trichinen; statt aber nun sofort für die Beschlagnahme des Schweines zu sorgen, lief er von einem Trichinenschauer zum anderen und von einem dieser Trichinenschauer erfuhr es der Verkäufer, der sich an den Bezirksthierarzt wendete, worauf sofort Anzeige bei dem Stadtrathe erfolgte. Von dem Schweine, das abgekapselte Trichinen zeigte, hatten 33 Personen Wellfleisch gegessen. Der Trichinenschauer wurde nach dem Regulativ für Trichinenschau bestraft und ihm sein Approbationsschein abgefordert. Da Niemand erkrankte, so war wegen fahrlässiger Körperverletzung nicht gegen denselben vorgehen. * * *

“In Bernbruch (Medicinalbezirk Grimma) wollte ein Trichinenschauer in einem geschlachteten Schweine, von welchem bereits mehrere Menschen gegessen hatten, eingekapselte und freiliegende Trichinen gefunden haben. Das Schwein wurde mit Beschlag belegt, und der Bezirksarzt aufgefordert, sich wegen der zu treffenden Anordnungen umgehend gutachtlich zu äussern. Obschon die nach Punkt 5 der Vorschriften vom 21. Juli 1888 für die Untersuchung des Schweineffleisches auf Trichinen vorgeschriebenen Dauerpräparate nicht beigegeben waren, beantragte derselbe, dass der Eigenthümer sich vorläufig jeglicher Verfügung darüber zu Genusszwecken zu enthalten habe und das trichinös befundene Schwein unter polizeilicher Controle zu zerhacken, mit Petroleum reichlich zu übergießen und tief zu vergraben sei, weil eine Nutzbarmachung des Fettes zu technischen Zwecken u. s. w. in ländlichen Verhältnissen kaum angängig sei. Zur Verhütung von Trichinoseerkrankungen bei denen, die bereits von dem Fleische genossen hätten, sei umgehend ärztliche Hülfe herbeizuziehen: gleichzeitig wurde nachträgliche Einsendung der Dauerpräparate verlangt. In diesen fand der Bezirksarzt in der That keine Trichinen, sondern nur ein Gebilde, das derselbe als ein zusammengerolltes Muskelbündel ansah. Zur weiteren Feststellung sollten von dem vergrabenen Schweine noch Fleischproben entnommen und dem Bezirkssarzte zugestellt werden, was aber nicht geschehen ist.”—*Günther, 1891, XXI Jahresbericht (1889), pp. 99, 100.*

Bernsbach bei Grunharn, March 41 cases, 0 death.

Günther, 1891, p. 91: *Hog had been inspected and passed as free from trichinae.*
Med.-Bez. Schwarzenberg.—Veröff., 1891, p. 699: *Hog had been inspected and passed as free from trichinae.*

1890: 117 cases, 0 death.

Summary for the year.—One outbreak with 117 cases. Source of infection not definitely traced.

In Amtshauptmannschaften Oschatz und Flöha, the reexamination of all the trichina inspectors was given into the hands of the district veterinarian. In Flöha the result of the examination was on the whole satisfactory, but several of the inspectors who had been trained 10 or 12 years previously had to be "plucked" as incapable of making the inspection.

In Oschatz, of 70 microscopists reexamined the work of 14 was beyond criticism, of 16 it was good, of 32 fair, of 8 unsatisfactory, so that a reexamination was here necessary. Most of the microscopes of this district were in good condition. Here and there some were dirty. In one case the adjustment screw was so rusty, the mirror so blinded, the lens so clouded with dirt and fat, that it could not be used.¹

Ernstthal,	{	July and August	{	74 cases, 0 death.
Hohenstein,				25 cases, 0 death.
Oberlungwitz,				18 cases, 0 death.

Günther, 1891, pp. 115, 116: 117 cases, 0 death. Source not definitely traced.—Günther, 1892, p. 77: "To the report of the Ernstthal epidemic last year should be added that the most probable supposition is that the trichina inspector had taken samples from a trichinous hog in the evening, but had not examined them until the following morning. Taking into consideration the small number of parasites found, he had failed to report the case because the butcher had, in the meantime, chopped and mixed the meat with meat from a second hog."—"Zu der im vorjährigen Berichte Seite 115 erwähnten Trichinenepidemie in Ernstthal ist noch nachzutragen, dass der wahrscheinlichsten Annahme nach der Trichinenschauer Abends von einem trichinösen Schweine Proben entnommen hatte, sie aber erst am nächsten Morgen untersuchte. Mit Rücksicht auf die geringe Menge der vorgefundenen Trichinen hatte er die Anzeige unterlassen, weil der Fleischer inzwischen das Fleisch mit dem eines zweiten Schlachtschweines zusammengehackt und verarbeitet hatte."

1891: 30 cases, 0 death.

Summary for the year.—One outbreak of 30 cases. This may have been due to meat which was inspected and passed as free from trichinae, or to a hog which was buried and afterwards dug up and made into sausage. The decree permitting the importation of Ameri-

¹"In den Amtshauptmannschaften Oschatz und Flöha ist die Beaufsichtigung sämtlicher Trichinenschauer dem Bezirksthierärzte übertragen. In letztgedachtem Bezirke war das Ergebniss der Prüfungen im Allgemeinen ein zufriedenstellendes, nur unter den älteren, vor 10–12 Jahren ausgebildeten mussten mehrere als unfähig zur Ausübung der Trichinenschau zurückgewiesen werden. Im erstgenannten Bezirke arbeiteten von 70 nachgeprüften Trichinenschauern nur 14 ganz tadellos, 16 gut, 32 genügend, 8 ungenügend, so dass sich eine Nachprüfung nothwendig machte. Die Mikroskope befanden sich in diesem Bezirke meist in gutem Zustande; vereinzelt waren sie verschmutzt: bei einem waren die Schrauben derart eingerostet, die Spiegel erblindet, die Linsen durch Schmutz und Fett undurchsichtig, dass dasselbe gar nicht benutzt werden konnte."—Günther, 1891, XXII Jahresbericht (1890), p. 127.

can pork was issued September 3, 1891. No cases are alleged to have been due to American products.

In Amtshauptmannschaft Dresden a microscopist had to be discharged because he did not find a single trichina in a preparation containing twelve parasites, because his microscope was so dirty that crusts could be scraped off with a knife, the lenses were smeared, and his records were found very loosely kept. In Amtshauptmannschaft Grossenhain 37 of the 40 microscopists were found "good" or "sufficient;" one had to be discharged as "entirely deficient." Of 23 microscopists in Amtshauptmannschaft Löbau 2 failed to pass the inspection as "totally deficient." In Amtshauptmannschaft Kamenz one microscopist had to be discharged because of carelessness in his work. In Amtshauptmannschaft Freiberg the examination was satisfactory throughout.¹

Alt-Gersdorf, Neu-Gersdorf, Amtsh. Löbau, July

30 cases, 0 death.

Veröff., 1891, p. 630: Hog apparently inspected and passed. "In den Ortschaften Alt- und Neu-Gersdorf der Amtshauptmannschaft Löbau erkrankten Mitte Juli etwa 30 Personen, darunter 15 Mitglieder einer Fabrikkrankenkasse, an Trichinose. Bei den Nachforschungen nach der Ursache der durchaus milde verlaufenden Erkrankungen wurde vom Bezirksarzte mit den behandelnden Aerzten nur festgestellt, dass die Erkrankten ungefähr 8 Tage vorher sogen. Räucherwürste von einem Fleischer in Alt-Gersdorf gegessen hatten. Das zur Bereitung dieser Würste verwendete halbe Schwein war von dem Fleischer und Trichinenschauer eines benachbarten Ortes gekauft, welcher das Fleisch bei der Untersuchung trichinenfrei befunden haben wollte. Besondere Sicherheitsmassregeln wurden in Folge des Vorfalles nicht für erforderlich erachtet; das gegen den Fleischer in Alt-Gersdorf Anfangs eingeleitete Strafverfahren wurde eingestellt."—Zeitschr. f. Fleisch- u. Milchhyg., 1891, I (11), August, p. 202: 40 cases.—Günther, 1892, p. 76: An Trichinose sind in Alt- und Neugersdorf bei Löbau im Sommer mehrere Personen erkrankt, aber in so leichter Form, dass Niemand bettlägerig geworden ist. Der Genuss von Räucherwürstchen soll die Ursache zur Erkrankung abgegeben haben. Von einem trichinösen Schweine ist aber damals dort nichts bekannt geworden; *man kam deshalb auf die Vermuthung, dass ein umgestandenes Schwein, welches verscharrt worden, heimlich ausgegraben und zur Wurstfabrikation verwendet worden sei, weil dieses Thier sich in der Erde nicht mehr vorfand.*" From this it would appear that the outbreak was caused by meat from a hog which had been buried but was afterward dug up and eaten.

1892: 0 case, 0 death.

"Von den Nachprüfungen der Trichinenschauer wird im Allgemeinen ein zufriedenstellendes Ergebniss berichtet, Amtsentsetzungen wurden bei 3 Trichinenschauern

¹ "Ueber die Revision der Trichinenschauer wird l. c. Folgendes Berichtet: In der Amtshauptmannschaft Dresden musste ein Schauer seiner Function enthoben werden, weil er in einem Präparate mit 12 Trichinen nicht eine fand, weil sein Mikroskop so verschmutzt war, dass man mit dem Messer die Krusten abschaben konnte, die Linsen ganz verschmiert und die Buchführung ganz liederlich gefunden wurden. In der Amtshauptmannschaft Grossenhain erwiesen sich von 40 Schauern 37 gut, bez. genügend, einer musste als ganz ungenügend entsetzt werden. Von 23 Schauern in der Amtshauptmannschaft Löbau mussten 2 als völlig ungenügend zurückgewiesen werden. In der Amtshauptmannschaft Kamenz musste ein Schauer wegen Nachlässigkeit in der Ausübung seines Berufes abgesetzt werden. In der Amtshauptmannschaft Freiberg war die Revision durchweg zufriedenstellend."—Günther, 1892, XXIII. Jahresbericht (1891), p. 91.

angeordnet, während bei 4 derselben eine Wiederholung der Nachprüfung vorzunehmen war. Wegen mangelhafter Beschaffenheit einzelner Bestandtheile des Mikroskopes mussten letztere mehrfach beanstandet und nach erfolgter Ausbesserung revidirt werden."—*Günther, 1893, p. 88.*

1893: 0 case, 0 death.

The official report (p. 79) states that no cases were registered. See, however, Leipzig. No cases alleged to be due to American pork.

"Bei den Nachprüfungen der Trichinenschauer wurden 7 der letzteren dauernd ihres Amtes entsetzt; bei mehreren waren Nachprüfungen erforderlich. Im Allgemeinen lauten jedoch die Berichte der Bezirksthierärzte über diese Angelegenheit zufriedenstellend."—*Günther, 1894, p. 83.*

Leipzig (1893 or 1894)..... [1 case, 0 death].

Zeitschr. f. Fleisch- und Milchhyg., 1896, VI (12), p. 245: One case each in Leipzig and Munich in hospitals. From Veröff.; possibly belongs to 1894.

1894: 2 cases, 0 death.

Summary for the year.—One outbreak of 2 cases reported, due to meat eaten before the inspector reported. No cases alleged to be due to American meats.

"Bei den Nachprüfungen der Trichinenschauer erwiesen sich die meisten derselben als genügend, eine grössere Anzahl jedoch erst bei wiederholter Nachprüfung. Bei einzelnen waren Unregelmässigkeiten in der Buchführung oder kleinere Mängel an den Mikroskopen zu beanstanden, die schnell abgestellt wurden. In einigen Fällen wurden Schauer wegen nachlässiger Buchführung der Amtshauptmannschaft angezeigt. Dauernd ihres Amtes entsetzt wurden vier Schauer, und zwar je einer wegen ungenügender Leistungen, Brandstiftung, Unterschlagung und Meineid. In einem grossen Trichinenschauamte erwiesen sich 11 Schauer als unsicher in der Untersuchung und wurden angehalten, erneut ihre Befähigung zur Ausübung der Trichinenschau gemäss § 13 der revidirten Verordnung vom 10. März 1893 beizubringen."—*Günther, 1895, p. 105.*

Leutzsch bei Leipzig..... 2 cases, 0 death.

Günther, 1895, p. 101: "An Trichinose sind nur 2 Personen erkrankt, und zwar 2 Frauen im Dorfe Leutzsch bei Leipzig, welche nach dem Schlachten eines von ihnen selbst aufgefütterten Schweines schon mit der Zubereitung des Bratwurstfleisches sich beschäftigt und bereits von dem rohen Fleische gekostet hatten, als ihnen vom Trichinenschauer das starke Durchsetztsein des Schweines mit eingekapselten Trichinen mitgetheilt wurde. Ein am Tage nach dem Genuss des Fleisches auf ärztliches Anrathen gebrauchtes Abführmittel (Calomel) konnte das Auftreten der Krankheit, das 3 Wochen später erfolgte, nicht verhindern; doch verlief die Krankheit bei beiden Personen leicht."

1895: 3 cases, 0 death.

Summary for the year.—Günther (1896, p. 91) says that no cases were known. See, however, Dresden, 3 cases. No cases are alleged to have been caused by American meats.

"In 10 Bezirken wurden insgesamt nach dem ungünstigen Ausfall der Prüfung 20 Trichinenschauer und ein Probeentnehmer ihres Amtes enthoben. Von diesen

gaben acht ihre Thätigkeit als Trichinenschauer freiwillig für immer auf, vier bestanden bei einer nochmaligen Prüfung an der thierärztlichen Hochschule in Dresden nach Absolvierung eines Cursus daselbst, während bei einem Schauer es die zuständige Amtshauptmannschaft mit einer Verwarnung bewenden liess, und vier anderen dauernd das Fähigkeitszeugniss entzogen wurde. Ueber vier suspendirte Schauer fehlt der weitere Ausgang der Angelegenheit in der Berichterstattung. In einem weiteren Bezirke erwiesen sich bei der ersten Prüfung 6 Schauer als ungenügend. Von diesen bestanden fünf bei einer Nachprüfung, der sechste nahm an einem Wiederholungscursus an der thierärztlichen Hochschule theil und erlangte erneut die Qualification als Trichinenschauer. Bei einem Schauer machte sich die Anschaffung eines neuen Mikroskopes nothwendig."—*Günther, 1896, p. 97.*

Dresden 3 cases, 0 death.

Zeitschr. f. Fleisch- und Milchhyg., 1895, V (5), p. 101: Ham came from Frankfurt a. M. Nothing said regarding inspection. A "family."

1896: 0 case, 0 death.

Günther (1897, p. 89) says no cases became known. No cases attributed to American meat.

"Ueber die Nachprüfungen der Trichinenschauer sprechen sich die Bezirksthierärzte im Grossen und Ganzen befriedigt aus. Immerhin erwiesen sich verschiedene Schauer als unzuverlässig, so dass sieben ihres Amtes enthoben werden mussten. Von letzteren konnten jedoch drei Schauer nach Erfüllung der ministeriellen Vorschriften wieder angestellt werden. Fünf Schauer wurden wegen verschiedener Regelwidrigkeiten mit Geldstrafen belegt."—*Günther, 1897, p. 95.*

1897: 2 cases, 0 death.

According to Günther, 1898, no cases occurred. See, however, Dresden, 1 case, due to inspected meat, and Leipzig, 1 case, no details. No cases attributed to American meats.

Dresden 1 case, 0 death.

Zeitschr. f. Fleisch- und Milchhyg., 1897, VII (11), p. 225: Sausage made from hog slaughtered in Mocker.—Idem (7), p. 145: *Meat was evidently inspected and passed.* "Dem Vernehmen nach soll grobe Fahrlässigkeit des Trichinenschauers die Schuld an dem bedauernswerten Vorfall tragen;" 40 cases, 2 deaths. See Mocker, 1897.—Veröff., 1897, p. 587.

Leipzig 1 case, 0 death.

Veröff., 1897, XXI (47), November 24, p. 958: Hospital. No details.

1898: 35 cases, 0 death.

Summary for the year.—Official report not accessible. Three outbreaks occurred with a total of 35 (?) cases, 0 death. One other outbreak—diagnosis disputed—was officially stated as not due to American pork. No case traced to American meats.

Chemnitz 2 cases, 0 death.

Veröff., 1898, XXII (46), November 16, p. 1005: 1 case in hospital. No details.—Veröff., 1898, XXII (49), December 7, p. 1070: 1 case in hospital. No details.—Der Fleischbeschauer, 1899, IV (1), January, p. 7.

Hohenstein-Ernstthal 3 cases, 0 death.

Zeitschr. f. Fleisch- u. Milchhyg., 1898, VIII (10), July, p. 198: *Meat stamped as free from trichinæ before inspection was ended.* Inspector imprisoned six months. "Der Trichinenschauer Oe. zu Hohenstein-Ernstthal ist zu 6 Monaten Gefängnis verurtheilt worden, weil er das Fleisch eines Schweines vor beendigter Untersuchung für trichinenfrei erklärt hatte. Das Fleisch erwies sich nachträglich als trichinös. Der Genuss desselben hat die Erkrankung mehrerer Menschen an Trichinosis verursacht."—Veröff., 1899, p. 321: Probably belongs here. Hog killed December 4, 1897, physician called January 18, 1898.

Neugersdorf [Saxony or Prussia?] 30 (?) cases, 0 death.

Zeitschr. f. Fleisch- u. Milchhyg., 1898, VIII (9), June, p. 178: Meat imported from Bohemia and not inspected. "Numerous cases." "In Neugersdorf erkrankten zahlreiche [=30?] Personen an Trichinosis, wie verlautet nach dem Genusse von ununtersuchtem Schweinefleisch, welches aus Böhmen eingeführt war."

Oberplanitz [38 cases, 2 deaths].

See p. 181.

[1899: 3 cases, 0 death.]

Official report for the Kingdom not accessible. See Chemnitz, 3 cases. No cases attributed to American meats.

Chemnitz 3 cases, 0 death.

Veröff., 1899, XXIII (6), February 8, p. 82: In hospital. No details.

[1900: 50 cases, 1 death.]

Official reports not accessible. See Gross-Schönau, 50 cases. No cases attributed to American pork.

Gross-Schönau [50 cases, 1 death].

Meat sold by a trichinæ inspector; it appears doubtful whether he had inspected the pork.

Deutsche thierärztliche Wochenschr., VIII (9), March 3, 1900, p. 80: "In Gross-Schönau (Sachsen) sind über 50 Personen an Trichinose erkrankt und eine daran gestorben. Ursache der Epidemie ist das Fleisch eines Schweines, welches der Fleischer, der zugleich Trichinenschauer ist, nicht untersucht hatte. In den noch vorhandenen Schinken des Schweines wurden Trichinen nachgewiesen. Der gewissenlose Trichinenschauer ist verhaftet und sieht seiner Verurtheilung entgegen. Die kranken Personen befinden sich auf dem Wege der Besserung, sodass weitere Todesfälle kaum noch vorkommen dürften."

Zeitschr. f. Fleisch- u. Milchhyg., 1900, X (6), March, p. 118: "Die Trichinosis in Gross-Schönau i. Sachsen, bei welcher 50 Personen erkrankt sind, hat ein Opfer gefordert. Die übrigen Erkrankten befinden sich auf dem Wege der Besserung. Der Trichinenschauer hatte seines Amtes in überaus leichtfertiger Weise gewaltet. Die Untersuchung eines Restes des schädlichen Schweinefleisches ergab, dass dasselbe stark mit Trichinen durchsetzt war."

C. GERMAN STATES, EXCLUSIVE OF PRUSSIA AND SAXONY.

Summary.—For a number of States no local reports, or only incomplete series, could be obtained, and in these instances the compiler was obliged to rely upon scattered sources of information. It may,

therefore, be assumed that some cases of the disease occurred which are not included in this list. For instance, one outbreak of about 10 cases is known to him, but he can not obtain any printed statements regarding it; hence he is unable to give a published reference as authority, and since this report is a summary of the printed evidence, almost entirely German, this outbreak is intentionally omitted. It might be added that one Prussian outbreak has been omitted for the same reason.

For the States in question, 873 cases, 17 deaths, have been collected, which may be divided, with reference to years, source of infection, etc., approximately as follows:

Summary for Germany, exclusive of Prussia and Saxony, 1881-1898.

1881-1882.		1883-1891.		1892-1898.		1881-1898.	
Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
260		437	16	176	1	873	a 17
.....				160	.....	160	(b)
256		208	.....	.....	.....	464	(c)
[256	]	[208	]	[160	]	[624	(d)]
.....		10	5	.....	.....	10	e 5
1		160	11	.....	.....	161	f 11
3		58	.....	16	1	77	g 1
.....		1	.....	.....	.....	1	(h)

a Totals divided as follows:

b Due to meat which, it would appear, was inspected and passed as free from trichinae.

c Due to other defects* in the meat inspection.

* Either inspected or noninspection due to carelessness, or eaten before inspection, etc.

d Total cases and deaths which may be attributed to faults of inspection.

e Definitely stated that meat was not inspected or that no inspection existed; source known.

f Source of infection known, but details regarding inspection not given, or not sufficient to justify conclusion.

g No data given regarding meat, or data insufficient to classify.

h Alleged to have been due to American meat, but evidence not accepted by Virchow.

It will be noticed that during the exclusion of American meat 437 cases, 16 deaths, occurred, an average of $48\frac{5}{8}$ cases, $1\frac{7}{8}$ deaths, per year; since its readmission 176 cases, 1 death, are reported, or an average of $25\frac{1}{4}$ cases, $\frac{1}{4}$ death, showing a decrease of $23\frac{8}{3}$ cases, $1\frac{8}{3}$ deaths, per year.

Of the 437 cases during 1883-1891, the source apparently remained undetermined or unreported in 59 cases, representing an average of $6\frac{1}{2}$ cases per year and 13.5 per cent of the entire number. Of the 176 cases during 1892-1898, the source of 16 cases apparently remained undetermined or unreported, representing $2\frac{2}{7}$ cases per year or 9.09 per cent of the entire number.

For the period 1883-1891, during which, with the exception of a few months, American pork was excluded, 1 case appears to have been

alleged by newspapers to be due to American pork, but Petri and Virchow do not accept the evidence.

It may further be noticed that of the total 873 cases for the years 1881-1898, 624 cases, or 71.4 per cent, may be attributed to various errors of the German inspection.

KINGDOM OF BAVARIA.

1853-1880: 103 cases, 4 deaths.

1881-1898: 50 cases, 2 deaths.

1853-1880.

Summary.—According to Truth (1880, p. 6) there were 97 cases, 4 deaths, from 1853-1879. This included 5 outbreaks in 1878 with 72 cases, and 1 outbreak in 1879 with 5 cases. Ostertag (1899, p. 491) gives Bollinger as authority for the same 97 cases, 4 deaths, in 8 epidemics between 1853 and 1879. During 1880, 6 further cases occurred, in 2 outbreaks of 3 cases each.

1881-1898.

Summary.—For 1881-1898, 50 cases, 2 deaths, have been collected. Of these, 45 cases occurred during the exclusion (1883-1891) of American meats, and 1 case since its reintroduction (1892-1898). The details regarding the source of infection are lacking in the majority of cases, but not a single case has been attributed to American goods.

1881: 3 cases, 0 death.

Schwabach (Bezirk), March 2 cases, ? death.

Lochner, 1881, pp. 255, 256: 2 cases.—Wasserfuhr, 1892, p. 154: 3 cases; probably one of these belongs to next entry.—Kerschensteiner, 1893, p. 84.

Wendelstein, Bez. Schwabach, May 1 case, ? death.

Lochner, 1881, pp. 255, 256.—Kerschensteiner, 1893, p. 84.

1882: 1 case, 0 death.

Bamberg 1 case, ? death.

Wasserfuhr, 1892, p. 154: "Halbgebratenes Schweinefleisch."—Kerschensteiner, 1893, p. 84: At hospital.

1885: 8 cases, 0 death.

Brückenau (Bez.-Amt) 3 cases, ? death.

Wasserfuhr, 1892, p. 155.—Kerschensteiner, 1893, p. 84.

Nürnberg (Bez.-Amt) 5 cases, ? death.

Wasserfuhr, 1892, p. 155.—Kerschensteiner, 1893, p. 84.

1886: 8 cases, 0 death.

Mellrichstadt (Bez.-Amt) 6 cases, ? death.

Wasserfuhr, 1892, p. 155.—Kerschensteiner, 1893, p. 84.

Parsberg (Bez.-Amt) 2 cases, ? death.

Kerschensteiner, 1893, p. 84.

1887: 14 cases, 0 death.

- Beyreuth (Bez.-Amt)** 10 cases, ? death.
 Wasserfuhr, 1892, p. 155: Raw "Hackbraten."—Kerschensteiner, 1893, p. 84.
- Nürnberg, November** 4 cases, 0 death.
 Veröff., 1887, p. 668.—Zeitschr. f. Fleischbeschau u. Fleischprod., 1887, III (2),
 December, p. 34.—Veröff., 1888, p. 269.—Dr. S., 1888: Sausages from Hersbruck.

1888: 1 case, 0 death.

- Oberfranken (Bez.)** 1 case, ? death.
 Wasserfuhr, 1892, p. 155: In an insane patient.—Kerschensteiner, 1893, p. 84.

1889: 1 case, 0 death.

- Hochstadt** 1 case, 0 death.
 Wasserfuhr, 1892, p. 155.—Kerschensteiner, 1893, p. 84.

1890: 8 cases, 0 death.

- Rehau** 5 cases, 0 death.
 Kerschensteiner, 1893, p. 84: Source traced.—Archiv f. anim. Nahrungsmittel-
 kunde, 1890, V (6), March, p. 75.

- Weissenbach** 3 cases, 0 death.
 Kerschensteiner, 1893, p. 85: Source traced. Kerschensteiner also speaks of cases
 having been diagnosed in Zeitloss, Amt Brückenau, in a decade, but does not
 specify year.

1891: 5 cases, 0 death.

- Lauf** 1 case, 0 death.
 Zeitschr. f. Fleisch- u. Milchhyg., 1891, I (11), August, p. 202: A butcher;
 from eating raw meat while making sausages. When the meat was inspected it
 was found to be heavily infested. Two-thirds of it had already been eaten with-
 out injury, "weil in Bayern Schweinefleisch nur gekocht genossen wird."

- Munich** 1 case, 0 death.
 Veröff., 1894, p. 393: In hospital. No details.

- Zeitloss, Unterfranken, B.-A. Brückenau** 3 ? cases, 0 death.
 Zeitschr. f. Fleisch- u. Milchhyg., 1892, II (4), January, p. 81: Several cases.
 "Ausserdem wird über die Erkrankung mehrerer Personen aus Zeitloss in Unter-
 franken berichtet." No details.

1894: 1 case, 0 death.

- Munich** 1 case, 0 death.
 Veröff., 1896, XX (12), p. 236: Patient between 16 and 30 years old. No fur-
 ther details.—Zeitschr. f. Fleisch- u. Milchhyg., 1896, p. 205.

BRUNSWICK.**1881-1898: 468 cases, 0 death.**

Summary.—Monthly health statistics for the Herzogtum Braun-
 schweig may be found in the Monatsblatt für öffentliche Gesundheits-
 pflege, by Dr. R. Blasius, who also gives summaries every one to three
 years. No cases have been attributed to American meats.

No cases have been collected for the years October, 1877, to September, 1880; January, 1881, to September, 1882; November, 1882, to July, 1885; September, 1885, to July, 1887; October, 1887, to March, 1897; May, 1897, to October, 1899. The cases collected are confined to the following years:

1880, 26 cases, 0 death. No details.

1882, 256 cases, 0 death. Hog either inspected or its noninspection due to carelessness.

1885, 4 cases, 0 death. No details.

1887, 207 cases, 0 death. Hog either inspected or its noninspection not explained.

1897, 1 case, 0 death. No details.

Thus, during the exclusion of American pork, 211 cases were reported, and since its readmission 1 case has become known.

[1880: 26 cases, 0 death.]

Schöppenstedt, December 10 cases, 0 death.

Monatsbl., 1881, IV (1), p. 15: "Von Trichinose wurden 10 neue Erkrankungsfälle aus Schöppenstedt gemeldet." No other details.—Blasius, 1881, p. 50.

Calvorde, October and November 16 cases, 0 death.

Blasius, 1881, p. 50.

1882: 256 cases, 0 death.

Brunswick and Koenigsutter, October 256 cases, 0 death.

Blasius, 1882, p. 665: "Die Untersuchung ergab, dass kein Verdacht vorlag, dass der p. Geese das Fleisch der gesetzmässigen Untersuchung entzogen oder etwa nicht untersuchtes Fleisch von auswärts bezogen habe, dass aber mit Bestimmtheit anzunehmen war, dass das inficirte Schwein in der Zeit vom 20. bis 27. September geschlachtet wurde. Aus den Schlachthausnotizen constatirte man, dass von dem Schlachter Geese im Schlachthause geschlachtet wurden am * * * und bei sämtlichen [Schweinen] die Untersuchung auf Trichinen stattgefunden hatte." *From this it would appear that the hog had been inspected and passed as free from trichinae.* Two hundred and four cases.—Monatsbl., 1882, V (11-12), p. 190: 254 cases in Brunswick and 2 cases in Koenigsutter. Meat from Brunswick.—Blasius, 1883, pp. 96, 97: 204 cases. "Der Schlachter, von dem das trichinenhaltige Fleisch verkauft war, gab an von auswärts kein Schweinefleisch ununtersucht eingeführt zu haben; in dem Schweine mussten so viel lebende Trichinen gewesen sein, nach der Menge der Erkrankungen zu schliessen, dass ein Uebersehen der Trichinen Seitens eines Trichinenschauers nicht anzunehmen ist und wahrscheinlich das Schwein durch ein Versehen im Schlachthause gar nicht zur Untersuchung gekommen war." It appears, therefore, that the hog either was inspected and passed as free from trichinae, or that through carelessness of the slaughterhouse authorities it was designated as inspected but was not inspected when it should have been.—Chatin, 1883, p. 140.—R. Blanchard, 1887, p. 139.

1885: 4 cases, 0 death.

Brunswick, August 4 cases, 0 death.

Monatsbl., 1885 (11), p. 173.

1887: 207 cases, 0 death.

Brunswick and Holzminden, August-September . 207 cases, 0 death.

Monatsbl., 1887 (11), pp. 181, 183: "In Braunschweig entwickelte sich eine ziemlich ausgebreitete Trichiniasis-Epidemie, auch in Holzminden kamen 6 Erkrank-

ungen vor, die auf dieselbe, den Genuss von Schweinefleisch aus dem Laden einer Schweineschlachtereie in Braunschweig, zurückgeführt werden konnten" [p. 181]. "An Trichiniasis erkrankten noch viele Personen in Braunschweig und auch im benachbarten Oelper, so dass im Ganzen in August und September über 200 Fälle angemeldet wurden, von denen keiner tödtlich verlief." [p. 183].—Veröff., 1887, p. 150.—Veröff., 1887, p. 642: 207 cases, German pork; "Die sorgfältigsten, alsbald angestellten Recherchen haben ein besonderes, strafrechtlich zu ahndendes Verschulden eines Einzelnen, bezw. die Umgehung der bezüglich der Fleischschau geltenden Bestimmungen nicht ergeben."—Zeitschr. f. Fleischbeschau u. Fleischprod., 1887, II (12), September, p. 146.—Idem, 1887, III (3), December, p. 34: "Man beschuldigt die auf dem Schlachthofe arbeitenden Trichinensucher, nachlässig ihres Amtes gewaltet zu haben und beabsichtigt, bessere Kontrollmassregeln einzuführen."—Idem, 1888, III (5), February, p. 50.—Blasius, 1889, pp. 136, 137: "Sämmtliche Fälle liessen sich auf eine hiesige Schweineschlachtereie, * * * zurückführen. [p. 136]. Die polizeiliche Untersuchung hatte das Resultat, dass das Schwein möglicher Weise das Schlachthaus passirt hatte, es wurden daher noch schärfere und genauere Bestimmungen in Bezug auf die Untersuchung der Schweine im Schlachthaus erlassen [p. 137].—R. Blanchard, 1887, p. 140.—Progrès Méd., September (1887).—Accordingly, it is not definitely demonstrated that the hog was inspected, but it appears to have passed through the slaughterhouse where the inspection is carried on.

1897: 1 case, 0 death.

Brunswick, April 1 case, 0 death.

Veröff., 1897, XXI (22), p. 461: No details given.

BREMEN.

1872 to 1880: 65 ? cases, 0 death.

1881 to 1898: 4 cases, 0 death.

1872 to 1880.

Two of these early outbreaks may be considered a moment, since they have been attributed to American pork.

1872.

Stackow, 1873, mentions no cases for this year. The following outbreak in 1873 has by at least one author (Bouley, 1884) been erroneously dated 1872.

1873: 9 or 20 cases, 0 death.

Lorent, 1874, p. 27: Mentions 6 cases in one outbreak and 3 other cases, which he implies were due to American pork, although he does not support this by proofs. (See p. 157 of present report.)

1874: 42 cases, 0 death.

Lorent, 1876, pp. 35, 36: Hog slaughtered July 31. Not alleged to be an American hog. Hastedt, Bremen.

1875, 1876: 0 case.

Lorent, 1877, p. 47: "Erkrankungen an der Trichinenkrankheit sind in den Jahren 1875 und 1876 nicht beobachtet worden."

1877, 1878: 0 case.

Lorent, 1880: No cases found in this report.

1879: 3 cases, 0 death.

Lorent, 1884, II, p. 5: Ham (American?). Apparently inspected and passed as free from trichinae. (See p. 163 of present report.)

1880: 0 case.

Lorent, 1884, p. 67: (See Geestendorf, R.-B., Stade, Prussia, p. 164 of present report.)

1881-1898.

Summary.—The only cases collected are 4 for the year 1885, when American pork was excluded.

1881-1884: 0 case.

Lorent, 1884, p. 67.—Pauli, 1889.—Bremen, 1884 (1883), 1885 (1880-1884).

1885: 4 cases, 0 death.

Pauli, 1889, pp. 27, 45, 46: Details not complete.—Bremen, 1888, p. 322.—Idem, 1890, p. 164.—Focke, 1889, p. 27: 3 cases.

1886: 0 case.

Pauli, 1889.

1887-1892: 0 case.

Pauli, 1894, p. 40: "Trichinose beim Menschen kam während des Zeitraums von sechs Jahren nicht zur Anmeldung."—Bremen, 1888, 1890, 1892, 1893. (See "Nixe" outbreak, p. 178 of present report.)

1893-1894: 0 case.

Bremen, 1894, 1895.

1895-1898: 0 case.

No Bremen reports accessible to me. No cases collected from other sources.

ALSACE-LORRAINE.

1881-1899: 0 case.

No cases of trichinosis have been found for Alsace-Lorraine for the period 1881-1896. Official reports for several years are lacking.

For the years prior to 1881, 2 outbreaks have been traced, both in the garrison at Diedenhofen. (See p. 161 of present report.)

Turning to the years 1881-1899, the following passages in the official reports may be noticed as showing the feeling regarding the trichina inspection.

Krieger (1889, p. 154) states that trichina inspection has been instituted in Diedenhofen. In the new slaughterhouse in Strasburg, rooms are arranged for a microscopic inspection, but it is not yet decided whether this will take place. He says further (1890, p. 124)

that the trichina inspection is to be instituted in Strasburg for meat which is to be eaten raw. Its introduction was almost universally opposed; a proposition was made to exclude all north German pork; the inspection was admitted to be uncertain; the selling of certificates for uninspected meat is mentioned; etc.

Pp. 78, 79, Kreis Schlettstadt: "Die Anfrage des Bezirkspräsidenten, ob es nothwendig oder [p. 79] wünschenswerth erscheine, die Trichinenschau einzuführen, wird nach dem Gutachten des Kreisarztes und Kreisthierarztes verneint."

P. 79, Kr. Molsheim: "Auch der Molsheimer Gesundheitsrath erklärt, dass man von der Trichinenschau absehen könne; wenn der Import von Schweinen aus Nord-deutschland erfahrungsgemäss vorkomme oder sich der Kontrolle entziehe, sei sie nöthig. Herr Grad führt des Weitern aus, dass die Trichinose bis jetzt in Elsass-Lothringen unbekannt sei und befürwortet ein Einfuhrverbot von Schweinen aus Norddeutschland. Der Gesundheitsrath schloss sich diesen Ausführungen an." (February 11, 1889.)

P. 83, Kr. Erstein: "Der Gesundheitsrath spricht sich dagegen aus, weil sie nicht nothwendig sei." (October 12, 1889.)

Pp. 86, 87, St.-Kr. Strassburg: "Der Gesundheitsrath glaubt mit Rücksicht darauf, dass bis jetzt noch keine [p. 87] Fälle von Trichinosis im Unter-Elsass vorgekommen sind, die Einrichtung der Trichinenschau bis zur Herstellung geeigneter Lokale, die im Projekt des neuen Schlachthauses vorgesehen seien, vertagen zu können." (November 6, 1888.)

Pp. 90, 91, Ld.-Kr. Strassburg: "Der Rath ist der Meinung, dass auf dem Lande die obligatorische Trichinenschau nicht [p. 91] nöthig ist, da hier das Schweinefleisch nicht in rohem Zustande genossen wird, und weil die Ausföhrung derselben auf grosse Schwierigkeiten stossen würde. (Mangel an geeigneten Personen zur Handhabung des Mikroskopes.) In grösseren Städten findet der Rath die Einföhrung der Trichinenschau wünschenswerth." (December 27, 1888.)

Pp. 95, 96, Hagenau: "3. Trichinenschau: Es wird zunächst der Bericht des Kreisarztes verlesen, wonach jährlich 1,800 Schweine hier geschlachtet, aber nur dasjenige Fleisch auf Trichinen bis jetzt untersucht wurde, welches den Truppen in die Herbstübungen geschickt wird und nach Angabe des Fleischbeschauers, Thierarzt Senfftleben, dasjenige, welches durch Darmreizung und Muskelentzündung bei den Thieren verdächtig war.

"Viele andere Thierkrankheiten veranlassten schon Wegnahme von Thiertheilen, und das machte nach Angabe des letzteren bei den Besitzern, die sich 'über viel strengere Behandlung als Strassburg' beklagten, bereits so viele Schwierigkeiten, dass eine Vermehrung letzterer durch die Trichinenschau die Neuanstellung eines zuverlässigen Gehülfen verlangen würde. Das erklärt der Kreisarzt für zweifellos, da die Durchsuchung der in dem Handbuch von Eulenberg [p. 96] für sichere Kontrolle als nöthig erklärten Normalpräparate mindestens 2 Stunden pro Schwein in Anspruch nehme. Er kommt deshalb auf den Vorschlag der 3. Versammlung des Deutschen Vereins für öffentliche Gesundheitspflege in München zurück, durch Untersuchung eines Prozentsatzes der Schweine zunächst feststellen zu lassen, ob Trichinen überhaupt hier vorkommen, inzwischen aber das Kochen des Schweinefleisches zu empfehlen. Er schliesst mit dem

"Antrag: Fleischbeschauer, die durch amtliche Uebung und Probe die Sicherheit im Erkennen der Trichinen dargethan haben, zu beauftragen

"1. eine bestimmte Anzahl (ca. 30 Schweine) in Hagenau, Bischweiler und Niederbronn jedes Jahr genau auf Trichinen zu untersuchen,

"2. von Privaten gegen eine bestimmte Taxe einzelne Fleischtheile, die man roh zu essen liebt, Schinken, Cervelatwürste, aus den durch Harpune eine Anzahl Fleischstückchen zu entnehmen sind, zur Untersuchung auf Trichinen entgegen zu nehmen.

“Der Bericht des Kreisthierarztes geht davon aus, dass auch durch Kochen und Braten grösserer Fleischtheile, wenn es nicht sehr ausgiebig geschieht, nicht alle Trichinen im Innern zerstört würden, und da die Möglichkeit eines Vorkommens von Trichinen hier nicht ausgeschlossen sei, so sei eine obligatorische Trichinenschau mindestens in den grösseren Orten Hagenau, Bischweiler und Niederbronn zu empfehlen. Herr Nessel verhält sich hiergegen im Allgemeinen ablehnend, da man ebenso gut auch die Dörfer würde schützen müssen, auf diesen aber jetzt die Fleischschau der reine Humbug ist. Die sogenannten Fleischbeschauer verkauften dort die Fleischbeschauzettel im Voraus, ohne nur ein Thier zu sehen und ihre daraus fliesende Rente wurde durch eine Trichinenschau nur nutzlos vergrössert werden. Herr Sanitätsrath Levy verhält sich auch ablehnend, weil im Elsass die Trichinose noch nicht vorgekommen. Der Kreisthierarzt wendet gegen beide ein, das eben, weil in Dörfern an eine ordentliche Untersuchung nicht zu denken sei, er Beschränkung auf die Städte vorschläge. Dass aber Trichinen noch nicht beobachtet seien, beweise nichts; auch in der Pfalz und Lothringen sei das früher nicht der Fall gewesen und doch *seien plötzlich in Speyer und Diedenhofen Epidemien durch einheimische Schweine hervorgerufen worden*. Herr Klein wünscht, der Kreisthierarzt möge zu seiner Information hierüber Untersuchungen machen. Der Vorsitzende erklärt sich für theilweise Untersuchung; der Kreisarzt erläutert seinen Antrag näher und glaubt das Nichtvorkommen von Trichinen hier könne auch durch allgemein üblichen Genuss gekochten Schweinefleisches vorgetäuscht sein. Herr Nessel bemerkt zu dem Antrag des Kreisarztes, dass aber verlangt werden müsse, dass die Sicherheit der Fleischbeschauer im Trichinen-Auffinden vorher amtlich festgestellt werden müsse. Darauf wird der Antrag des Kreisarztes in obiger Fassung angenommen.”

P. 100, Kr. Weissenburg: “Der Kreisgesundheitsrath spricht sich gegen die Einführung der Trichinenschau aus, da der Genuss des ungekochten Schweinefleisches nicht gebräuchlich sei, die Einführung der Trichinenschau jedoch eine Vermehrung des Genusses ungekochten Schweinefleisches zur Folge haben könne, die Trichinenschau aber eine vollständige Gewähr für Trichinenfreiheit nicht biete und insbesondere von den ländlichen Fleischbeschauern voraussichtlich nicht mit der genügenden Sachkenntniss und Gewissenhaftigkeit gehandhabt werden würde.

“Gegen die Stimmen der übrigen Mitglieder spricht sich Oberstabsarzt Dr. Oppler für die Einführung der Trichinenschau aus.”

P. 124. “Trichinenschau. In Strassburg sind Räume zur Ausführung derselben fertiggestellt. Es soll die Trichinenschau eingeführt werden jedoch beschränkt auf das Fleisch, welches zum Genuss in rohem (ungekochtem) Zustande bestimmt ist. Der Herr Bezirkspräsident hat den unterelsässischen Gesundheitsräthen die Frage vorgelegt, ob die Trichinenschau nothwendig sei, die Frage wurde allseitig verneint.”

HAMBURG.

1881–1898: 127 cases, 10 deaths.

Summary.—A full series of health reports could not be obtained. In all, 127 cases, 10 deaths, have been collected from 1881–1898. Of these, 123 cases, 9 deaths, occurred during the exclusion (1883–1891) of American pork; 4 cases, 1 death, since its readmission. Details are lacking in most cases (including the 4 cases, 1 death, since 1892), but not a single case or a death has been attributed to American meats.

1884, February: 50 cases, 0 death.

Veröff., 1886, p. 231: Not stated whether the meat was inspected or not. Source of infection known.

1887, August-September: 99 or 72 cases, 9 deaths.

Veröff., 1887, p. 523: 27 cases.—Idem, p. 533: 57 cases, 4 deaths.—Idem, p. 551: 13 cases, 4 deaths.—Idem, p. 561: 2 cases, 1 death.—Idem, pp. 606, 607, from August 21 to September 15: 72 cases, 9 deaths. Not stated whether meat was inspected or not. Twenty-four cases traced to meat from 3 butchers.—Zeitschr. f. Fleischbeschau u. Fleischprod., 1887, II (12), September, p. 146: 58 cases, 5 deaths, to September 2.—Idem, 1888, III (5), February, p. 49: 72 cases, 9 deaths.

1886.

(See Wansbeck, under Prussia, p. 000.)

1889: No hospital cases.

Hamburg, 1890, I, pp. 14, 15, 18, 19, 23, 28, 88, 131.

1890: 1 case, 0 death.

Hamburg, 1892, II, p. 15: No details.

1891: No hospital cases.

Hamburg, 1894, III, pp. 5, 10, 16, 21, 135.

1892: No hospital cases.

Hamburg, 1894, III, pp. 164, 169, 175, 180, 244, 250, 290.

1893: No hospital cases.

Hamburg, 1896, IV, pp. 5, 10, 16, 21, 27, 87, 92, 154.

1894. Neues allgemeines Krankenhaus: 2 cases, 1 death.

Hamburg, 1896, IV, p. 204: 1 case, 1 death. No details.—Idem, p. 210: 1 case, 0 death. No details.

1895. Neues allgemeines Krankenhaus: 1 case, 0 death.

Hamburg, 1897, V, p. 6: No details.

1896: 1 case, 0 death.

Veröff., 1896, XX (35), August 26, p. 671: Hospital. No details. This case was not found in the Jahrbücher, 1897, V, pp. 126, 154, 224.

LÜBECK.**1881-1898: 0 case.**

The Jahres-Bericht des Medicinal-Collegiums for Lübeck for the years 1881-1895, signed by Dr. Rittcher, gives only the deaths from various causes. No deaths are given for trichinosis, and no cases or deaths have been collected from other sources.

THE REST OF GERMANY.**1881-1898: 224 cases, 5 deaths.**

Summary.—Of a total of 224 cases, 5 deaths, 54 cases, 5 deaths, occurred during the years 1883-1891. The source of 16 cases was known, but nothing is said regarding inspection. Source of 4 cases,

1 death, is known; meat probably not inspected, as no inspection existed in the town. Six cases, 4 deaths, due to uninspected meats. Twenty-eight cases are given without details, except that some newspapers expressed the view that 1 case was due to American pork. For the years 1892-1898, 170 cases are reported. Of these, 160 cases are alleged to have been due to pork which was inspected and passed as free from trichinae. The other 10 cases are given without details, except that they occurred in a place where inspection does not exist.

[1871: ? 1 case.]

[Rostock..... 1 ? case, ? death].

According to Bouley (1884, p. 395), a case of trichinosis is alleged to have occurred in Rostock in 1871, and was attributed to American meats. Petri, however, according to Virchow (1884) (see p. 184 of the present report), definitely states that no case of this disease appears to have been known in Rostock for sixteen years prior to his statement [1869-1884], except 1 alleged case in 1883.

1881, 1882: No cases collected.

1883: 15 cases, 0 death.

Friedburg in Hessen, February..... 4 ? cases, 0 death.

Merkel, 1885, p. 351: Patient was not really sick, but had eaten trichinous sausage. Several other persons were sick.

Rostock, Mecklenburg-Schwerin..... 1 case, 0 death.

Virchow, 1884. (See p. 184 of present report.) A soldier stationed in Rostock was in Tessin on leave and became infected with trichinosis. The disease did not show itself until he returned, and "so came about those newspaper reports and newspaper views that he had become infected in Rostock from eating American pork." No serious reliance can be placed upon such newspaper evidence.

Tessin, Mecklenburg-Schwerin..... 10 ? cases, ? death.

Virchow, 1884, p. 540: After Petri, see above (Rostock), also p. 184 of this report. "Many" cases.

1884, 1885: No cases collected.

1886: 12 cases, 2 deaths.

Waldenburg i. S..... [? case, ? death].

Zeitschr. f. Fleischbeschau u. Fleischprod., 1886, II (3), December, p. 39: "In Waldenburg i. S. [=Saxony? or Silesia?] sind mehrere Fälle von Trichinosis, darunter eine sehr schwere Erkrankung, vorgekommen." Perhaps this refers to the Alt-Waldenburg (Saxony) outbreak, see p. 137.

Ruppersdorf bei Lobenstein (Reuss-Schleiz?)... 12 ? cases, 2 deaths.

Zeitschr. f. Fleischbeschau u. Fleischprod., 1886, II (1), October, p. 9: "In Ruppersdorf bei Lobenstein und in den angrenzenden Ortschaften ereigneten sich zahlreiche Erkrankungen; 12 Personen liegen schwer krank darnieder und 2 Personen, Frau und Tochter des Fleischers und Wirthes, welcher das trichinöse Schwein schlachtete und verkaufte, sind gestorben." Source known.

1887: No cases collected.

1888: 17 cases, 0 death.

Nienburg a. S. (Anhalt?)----- 17 cases, 0 death.

Archiv f. anim. Nahrungsmittelk., 1888, IV (1), October, p. 16: "Die Tagespresse berichtet, dass in Nienburg a. S. 17 Personen an der Trichinosis erkrankt seien." No details.

1889-1890: No cases collected.

1891: 10 cases, 5 deaths.

Auerbach a. d. Bergstrasse, Hessen----- 4 cases, 1 death.

Zeitschr. f. Fleisch- u. Milchhyg., 1891, I (8), May, p. 142: No trichina inspection here.—Archiv f. anim. Nahrungsmittelkunde, 1891, VI (8), p. 119: "An Trichinose ist hier eine Frau gestorben. Der betr. Metzger, von welchem die trichinöse Wurst gekauft war, soll ebenfalls mit dreien seiner Leute schwer krank darniederliegen."—Idem (10), July, p. 142: 4 cases, 1 death. Official statement by Dr. Heumann.

Themar, Sachsen-Meiningen----- 6 cases, 4 deaths.

Zeitschr. f. Fleisch- u. Milchhyg., 1891, I (10), July, p. 183: Meat not inspected.—Archiv f. anim. Nahrungsmittelk., 1891, VI (10), July, p. 142: 6 cases, 4 deaths.

1892: No cases collected.

1893: 10 cases, 0 death.

Meuselwitz, Saxe-Altenburg----- 10 ? cases, 0 death.

Zeitschr. f. Fleisch- u. Milchhyg., 1893, IV (4), December, p. 60: "In dem Altenburgischen Städtchen Meuselwitz ist eine grosse Anzahl von Personen an Trichinosis erkrankt. Trichinenschau besteht in M. nicht." No inspection here. Details not given.

1894-1897: No cases collected.

1898.

Sandersleben, Anhalt----- 160 cases, 0 death.

Zeitschr. f. Fleisch- u. Milchhyg., 1898, X (2), November, p. 39: "In Sandersleben liegen gegen 160 Personen nach Genuss angeblich untersuchten Schweinefleisches an Trichinosis darnieder." *Meat said to have been inspected and passed as free from trichinæ.*

Part III.—EUROPEAN CASES OF TRICHINOSIS OF ALLEGED AMERICAN ORIGIN (Stiles).

The question as to how many cases of trichinosis in Europe have actually been traced to American meats is by no means a new one. It has been discussed in Germany, particularly by Virchow, Fränkel, and Wasserfuhr; in France, particularly by Brouardel, Bouley, Chatin, and R. Blanchard; and in America, particularly by Salmon. While the alleged cases in Germany alone need be considered for the question now under discussion, it may be well to mention all of the European cases which have been collected regarding which it has ever been intimated or alleged that they were of American origin. Unfortunately the original literature in connection with several outbreaks is not accessible to the writer, and regarding certain other outbreaks the published data are exceedingly meager and incomplete. It should be noticed that, with the exception of the *Nixe* outbreak (1891), the Mecklenburg (1897) and Oberplanitz (1898) cases, all of the alleged cases belong to "past history." In fact, only the Mecklenburg and Oberplanitz cases come into consideration at all in connection with the subject of American certified pork. The publisher of the Mecklenburg cases afterwards contradicted the report, while the American origin of the Oberplanitz case is not supported by the slightest evidence.

So far as it has been possible to gather from the literature consulted, the following appears to be a complete list of the European cases of trichinosis which have been intimated as due to or alleged to be due to American pork. If other cases have been so reported, the fact has escaped my attention:

Date.	Locality.	Cases.	Deaths.	Reference to discussion in this report; remarks.
1864	Altona, Germany.....	1	0	P. 157. Contracted and recovered in America.
1871	Rostock, Germany.....	1	0	P. 157. Evidence not accepted by Virchow.
1873	Bremen, Germany.....	20	0	P. 157. Evidence incomplete.
1874	Altona, Germany.....	4	0	P. 160. Evidence incomplete.
1874	London, England.....	1	0	P. 160. Contracted in New York.
1877	Diedenhofen, Germany	109	9	P. 161. Evidence absurd.
1878	Crépy-en-Valois, France.....	21	1	P. 163. French hog.
1879	Bremen, Germany.....	3	0	P. 163. Evidence incomplete. Meat apparently inspected in Bremen.
1879	Ship <i>Cornwall</i> , England	43	1?	P. 164. Not trichinosis.
1880	Geestendorf, Germany.....	7	0	P. 164. Imported live hog. Meat apparently inspected in Germany.
1880	Brussels, Belgium	1	0	P. 165. Only conjecture.
1880	Barcelona, Spain	(?)	6	P. 165. Evidence incomplete.

Date.	Locality.	Cases.	Deaths.	Reference to discussion in this report; remarks.
1881	Madrid, Spain	(?)	6	P. 166. Evidence incomplete.
1881	Chemnitz, Germany	1	0	P. 167. Evidence incomplete; alleged to have been contracted on trans-Atlantic voyage.
1881	Düsseldorf, Germany	16	3	P. 167. Evidence not admitted by Virchow, Hertwig, Brouardel, Wasserfuhr, or Fränkel.
1882	Prov. Liège, Belgium	11	0	P. 173. Can not be traced.
1882	Marshall (?)	(?)	3	P. 173. Can not be traced.
1883	Cologne, Germany	1	0	P. 173. Can not be traced, unless it refers to a cat.
1883	Malaga, Spain	1	1	P. 174. Evidence incomplete.
1883	Valencia, Spain	6	1	P. 177. Evidence incomplete.
(?)	Cologne, Germany	7	(?)	P. 178. Can not be traced. Evidence not admitted by Wasserfuhr.
1891	Bremen bark <i>Nixe</i>	17	0	P. 178. Due to South American <i>fresh</i> pork.
1897	Mecklenburg, Germany	(?)	(?)	P. 180. Report afterwards contradicted by its publisher.
1898	Oberplanitz, Germany	1	0	P. 181. Not supported by the slightest evidence.

Altona, Germany, 1864 1 case, 0 death.

Groth (1864, pp. 602-609) refers to a German woman who contracted the disease in America in 1856; afterwards returning to Germany, she died in 1864, and incapsulated trichinæ were found. Timm (1864, pp. 447, 448) also refers to the same patient. Thus this case belongs to American, not to European, statistics, and has no bearing whatever on the American pork question in Europe.

Rostock, Mecklenburg-Schwerin, 1871 1 case, ? death.

According to Bouley (1884, p. 395) a case of trichinosis occurred in Rostock in 1871 which the German Government attributed to American pork. Thus far I have been unable to trace this case, but Virchow (1884) discusses trichinosis in Rostock and evidently does not credit the alleged case to American origin. (See p. 184 of this report.)

Bremen, Germany, 1873 9 or 20 cases, 0 death.

A number of authors have referred to an outbreak in Bremen which is alleged to have been due to American meat. The following references are the most important ones found in regard to it.

Lorent, 1874, p. 27: "By such frequent findings [of trichinæ] in American hams, instances of carelessness have not been lacking, which resulted in cases of trichinosis. Nine times trichinosis has been diagnosed by various physicians. At one time 6 persons became sick from the same sources; the other 3 cases were single. All of the cases were light. The severer case resulted from eating lean meat. Recovery in all cases."¹

¹"Bei so häufigem Befunde in Amerikanischen Schinken hat es nicht an Unvorsichtigkeiten gefehlt, in deren Folge Trichinenerkrankungen vorgekommen sind. Von verschiedenen Aerzten sind 9 mal Trichinen-Erkrankungen constatirt worden. Einmal erkrankten 6 Personen aus einer Quelle, die drei übrigen Fälle waren Einzel-Erkrankungen. Die Erkrankungen waren durchgehends leicht, für die intensivere Erkrankung war der Genuss des mageren Schinkenfleisches maassgebend. In allen Fällen trat Genesung ein."

These are apparently the same outbreaks mentioned by Focke (1873, p. 191), as follows:

"Dr. G. W. Focke announces from Bremen that the first cases of trichinosis after eating imported North American pork have been observed in that city. A smoked shoulder, purchased at an auction, infected twelve persons. The youngest persons, ten or twelve years old, were least affected; the older patients suffered more. Later, further cases, caused by other hams, were observed and the patients already number more than twenty. Examination always showed the presence of numerous living trichinæ, which leads to the suspicion that in the large abattoirs of North America the hogs have access to the offal, that they thus become infected, and later, when they are themselves slaughtered, add to the infecting offal. In this manner the evil must spread and increase rapidly, and people should be especially warned against eating raw American pork. The so-called rapid-smoking process had evidently killed the trichinæ in the peripheral portions of hams, as the capsules had swollen and assumed an oval form and the worms had become opaque and granular. Nearer the bone, however, the meat was raw and the parasites intact."¹

Roeper, 1874, p. 282: "The Berliner klinische Wochenschrift reported, a short time ago, a trichinosis epidemic in Bremen, where, as a result of eating American pork, more than 20 persons became sick." * * *

Chatin, 1883, p. 134: "The recollection of this epidemic ought to suffice to convince the optimists who affirm that no danger would result from the use of American salted meats. Forty [see original records] persons were affected with a grave trichinosis determined by a ham of American origin."²—*Idem*, p. 210.

Raenkel, 1891, p. 1388: "It has now been shown that in those countries in which a prohibition of American pork has never existed, and no special inspection of the imported wares takes place, and every year large quantities of this food are

¹ "Dr. G. W. Focke meldet aus Bremen, dass dort die ersten Fälle der Trichinose, nach dem Genusse von importirtem nordamerikanischen Schweinefleisch entstanden, beobachtet wurden. Ein in Auction erstandener geraucherter Vorderschinken inficirte 12 Personen; die jugendlichsten, 10-12 Jahre alten waren am leichtesten erkrankt, ältere litten schwerer. Später wurden weitere Erkrankungsfälle, aus anderen Schinken herrührend, beobachtet, und stieg die Zahl der Erkrankten bereits über 20. Die Untersuchungen ergaben immer häufiger massenhaftes Vorkommen von lebenden Trichinen, was auf den dringenden Verdacht führt, dass in Nordamerika auf den grossen Schlächtereien die zugetriebenen Schweine über den Schlachtabfall gerathen können, sich hier gelegentlich inficiren, und später selbst geschlachtet, nun inficirende Beiträge zu dem Schlachtabfalle liefern. Danach würde das Uebel in ausgedehntester und rapider Weise zunehmen müssen, und ist vor jedem Genusse rohen amerikanischen Schweinefleisches dringend zu warnen. Es hatte die sogenannte Schnellräucherungsmethode in dem beregten Schinken wohl die peripherischen Trichinen getödtet, indem die Kapseln, aufquellend, eine Eiform angenommen hatten, und die Würmer undurchsichtig und körniger geworden waren. Weiter gegen den Knochen hin war jedoch das Fleisch ganz wie roh und die Thierchen intact."—*Berl. klinische Wochenschrift*, 1873, X (16), April 21, p. 191.

² "Die 'Berliner Klinische Wochenschrift' berichtete nämlich vor einiger Zeit von einer Trichinenepidemie in Bremen, wo in Folge des Genusses von amerikanischem Schweinefleisch über zwanzig Personen erkrankten. Ich werde den Bericht, da er mir noch zu einem anderen Zwecke dienen soll, später wörtlich mittheilen."

³ "Le souvenir de cette épidémie devrait suffire à convaincre les optimistes qui affirment que nul danger ne saurait résulter de l'usage des salaisons américaines; quarante personnes furent atteintes de trichinose grave déterminée par un jambon de provenance américaine." [Outbreak erroneously dated 1875.]

consumed, for example, in England, Belgium, Holland, etc., trichinosis in man either belongs to the greatest rarities or does not occur. And, just the same, it is a fact that in those lands which have, or did have till recently, a prohibition, *before the promulgation of such decrees*, cases of trichinosis in man which can be blamed with certainty upon American pork are to be placed among the very rare exceptions. The latter results with perfect clearness especially from the exceedingly careful and learned examination, which R. Virchow has published in detail in volume 95 of his Archives, of the cases of trichinosis of alleged American origin. He showed that, upon closer examination, the great majority of the reports in question vanished into nothing, and that only two of them retained a tangible form. One was the Bremen epidemic described by Dr. Focke. Twelve or nine persons are said to have become sick after the consumption of an American ham obtained at an auction. At the same time two additional cases occurred in Dr. Göring's practice, after the consumption of a salted ham smoked in Bremen. These communications are in truth as indefinite as possible.¹ * * *

Ostertag, 1899, p. 506: "In Bremen, according to Roeper [see above] 40 [see above, 20] persons were taken sick with trichinosis who had eaten *only* [see above] American hams."²

Ostertag apparently does not refer to Roeper, 1874, p. 282, since Roeper does not state "40," but "more than 20," nor does he say that they had eaten "only" American meat. In connection with this outbreak, see also Virchow's remarks quoted on p. 182.

¹ "Es hat sich nun gezeigt, dass in denjenigen Ländern, in welchen niemals ein Einfuhrverbot für amerikanisches Schweinefleisch bestanden hat, auch eine besondere Untersuchung der eingebrachten Waaren nicht stattfindet und alljährlich sehr erhebliche Mengen dieses Nahrungsmittels verzehrt werden, z. B. in England, Belgien, Holland u. s. w., die menschliche Trichinose entweder zu den grössten Seltenheiten gehört oder überhaupt nicht vorkommt. Und ebenso ist es eine Thatsache, dass in denjenigen Ländern, welche ein Einfuhrverbot besitzen bezw. bis vor kurzem besaßen, vor Erlass desselben Fälle von Trichinenerkrankung beim Menschen, die mit Sicherheit dem Genuss von amerikanischem Schweinefleisch zur Last gelegt werden könnten, unter die sehr grossen Ausnahmen zu rechnen sind.

"Es ergibt sich das letztere mit vollständiger Deutlichkeit namentlich aus der überaus sorgfältigen und gewissenhaften Prüfung, welche R. Virchow den angeblich auf amerikanischen Ursprung zurückzuführenden Fällen von Trichinose hat angedeihen lassen, und über welche er im Bd. 95 seines Archivs eingehend berichtet. Er ermittelte, dass die grosse Mehrzahl der betreffenden Angaben sich bei näherem Zusehen in nichts auflöste, und dass nur zwei derselben eine etwas greifbarere Gestalt behielten. Die eine betraf eine von G. W. Focke (Berl. klin. Wochenschrift 1873, p. 191) beschriebene Epidemie aus Bremen; 12 oder 9 Personen sollten nach dem Genuss eines amerikanischen, in einer Auction erstandenen geräucherten Vorderschinkens erkrankt, niemand der Infection zum Opfer gefallen sein. Zu gleicher Zeit seien in der Praxis des Dr. Göring zwei weitere Erkrankungsfälle vorgekommen, u. d. zwar nach dem Genuss eines gesalzenen, nachträglich in Bremen geräucherten Schinkens. Diese Mittheilungen sind in Wahrheit so unbestimmt wie möglich und geben Virchow Veranlassung zu der Bemerkung: 'Obwohl mir Dr. Focke persönlich als ein wissenschaftlich gebildeter Arzt bekannt war, so vermag ich doch mein Erstauen nicht darüber zu unterdrücken, dass er der einzige geblieben ist, der nicht nur lebende Trichinen in amerikanischen Schinken, sondern sogar' immer häufiger, massenhaftes Vorkommen 'derselben constatirt hat.'"—*Deutsche med. Wchnschr.*, 1891, XVII (51), Dec. 17, p. 1388.

² "In Bremen sind nach Röper 40 Personen, welche nur von amerikanischen Schinken genossen hatten, an Trichinose erkrankt."

Altona, R.-B. Schleswig-Holstein, Germany, 1874. 4 cases, 0 death.

In connection with this Regierungs-Bezirk (see p. 123), it may be well to refer to a small outbreak in 1874 which was alleged to be due to American pork. Bockendahl (1875, p. 10) records it as follows:

"Several members of a family (three adults and a 4-year-old child) were taken sick as the result of eating a ham which a sailor had brought with him from New York and given to his fiancée. The sailor himself was on board and underway when the disease broke out. Symptoms appeared twelve days after the meat was eaten. All patients recovered. The rest of the ham, which had been cooked, contained numerous encapsuled trichinæ."¹

Regarding this outbreak, the following points are to be noticed: First. These patients ate some ham, evidently raw, and were taken sick twelve days later. It is not stated whether, during or preceding these twelve days, any other pork was eaten. Hence the evidence that the patients became sick as a result of eating from a particular ham twelve days before the symptoms appeared is by no means demonstrated, although it must be admitted that it might easily have been that particular ham which gave rise to the infection. Second. Numerous encapsuled trichinæ were found "in the rest of the ham, which had been cooked." Here it is necessary to admit the possibility that the trichinæ in that particular ham might have been alive before the ham was cooked, but no such fact was demonstrated. Third. This ham is said to have been brought by a sailor from New York. Even if this statement is correct, no case is demonstrated against American pork, for, as stated above, no record exists eliminating other pork.

Summarizing the Altona cases, it is necessary to admit that, from the data at hand, it looks as if these four cases of trichinosis might possibly have been due to eating American pork, but it may be maintained that at present the data at hand point only to suspicion, and that it is not demonstrated that American pork was the cause of this small and light epidemic, which occurred years before the certification of American meats.

London, England, 1874 1 case, 0 death.

A case in London, 1874, was reported by Sydney Coupland. A patient who died in Middlesex Hospital showed an enormous infection of trichinosis. One grain of the muscle of the thigh was found to contain 180 of the cysts, "so that (roughly speaking) the man must

¹"Durch einen von einem Seemann aus New York mitgebrachten Schinken, welchen er seiner Braut in Altona schenkte, erkrankten mehrere Familienmitglieder, 3 Erwachsene und ein 4jähr. Kind. Der Seemann selber war, als die Krankheit ausbrach, bereits wieder an Bord und unterwegs: 12 Tage nach dem Genuss Krankheitserschneinungen; alle genesen; der Rest des Schinkens, welcher gekocht gewesen war, enthielt massenhaft eingekapselte Trichinen."

have been the host of about 75,000,000 of these parasites." The last paragraph of Coupland's article reads as follows:

"It is highly probable that the patient contracted the disease nine years ago in New York, where he stayed eighteen months, for during that time he had an attack of 'enteric fever,' which was said to have nearly 'lost him his life.' He was left in a very prostrate condition for more than twelve months, and his health had never been fully restored."—*Coupland, 1874, pp. 262, 263.*

From this quotation of Coupland, who originally reported the case, it will be seen that this case has no bearing whatever upon the importation of American pork into Europe. The case should be counted among the American, not the European, outbreaks.

Diedenhofen, Germany, 1877 109 cases, 9 deaths.

Quite an extensive outbreak occurred in 1877, of which Zündel (1879, p. 24) gives the following account in his official report (*italics not in the original*):

"Trichinosis was recognized in May among the troops at Diedenhofen. More than a hundred of them were taken sick. *The infection seems to have been caused by two local hogs, the meat of which was bought by the soldiers and eaten raw.* Their sickness was, however, rather mild, and of the 102 military patients only 7 died; of 7 civilians who became sick at the same time, 2 died. The swine of both pens from which the infected animals came were examined for trichinosis. Part of them were examined alive, part dead, but no trichinæ were found. It should be remarked that last year some soldiers of the garrison were taken sick with trichinosis as a result of eating sausage which was sent from Brandenburg."¹

In a footnote evidently added during proof reading, Zündel says:²

"More recent inquiry shows that besides the fresh pork there was also some American ham in the meat salad which caused the infection."

In his next report Zündel (1880, p. 39) makes the following statements:

"Trichinæ also have not yet been found in local hogs, nor in living hogs which have been imported into this region. This is for the most part to be accounted for by the

¹ "Die Trichinose wurde zu Diedenhofen im Mai unter den Soldaten erkannt; mehr denn hundert von diesen sind erkrankt. Die Infection scheint durch zwei einheimische Schweine verursacht, deren Fleisch von den Soldaten gekauft und roh genossen worden war. Die Krankheit war jedoch ziemlich gutartig und von den 102 erkrankten Militärs sind nur 7 gestorben; von 7 zu gleicher Zeit erkrankten Civilpersonen sind 2 gestorben. Die Schweine der beiden Gehöfte, aus welchen die inficirten Thiere gekommen waren, wurden auf Trichinen untersucht, und zwar theils lebend, theils geschlachtet; es sind bei ihnen keine Trichinen gefunden worden. Zu bemerken ist, dass im Vorjahre schon einige Soldaten der Garnison an Trichinose erkrankten in Folge des Genusses von Würsten, welche aus Brandenburg geschickt worden waren. Es wurde angeordnet, dass die in der Abtrittsgrube des Lazareths während der Seuche gesammelten Faeces nicht direkt auf die Aecker geführt wurden, sondern in eine gedeckte Grube; es lag nämlich die Möglichkeit vor, dass unter den Abfuhrstoffen lebende und befruchtete Darmtrichinen vorhanden seien, welche auf der Weide von Schweinen hätten verschluckt werden können."—*Zündel, 1879, p. 24.*

² "Neuere Recherchen haben dargethan, dass unter dem Fleischsalate, durch welchen die Infection verursacht wurde, neben dem frischen Schweinefleische auch solches von amerikanischen Schinken sich befand."

fact that the fresh meat is only seldom examined microscopically for this worm, and those worms which might be present are therefore not seen. *Further, however, any such worms which might be found in our hogs are not dangerous, and have never caused an infection in man in this locality, probably because meat is eaten only when it is well cooked.* In American pork, which is now so common on the market, trichinae are, on the other hand, frequently found, and it is assumed that of 100 pieces of salted or smoked meat or bacon, 2 are trichinous. These trichinae in American meat are, however, often dead and accordingly not capable of reproduction, and not dangerous. Experiments made on hogs in Diedenhofen and in Basel with American meat which was very trichinous were absolutely negative. Similar experiments in Strassburg upon rabbits also gave four negative results. These experiments are, however, not sufficient to suppose the safety of all American trichinous pork, as instances of heavy infection from such meat (*for example last year among the troops in Diedenhofen*) are known.”¹

It must be confessed that it is difficult to follow the process of reasoning used by this German official. After making the explicit statement that the meat which caused the epidemic at Diedenhofen in 1877 was eaten raw, and seems to have come from two local hogs, also the equally explicit statement that there was also an outbreak in the garrison in 1876, caused by sausage from Brandenburg, he claims that “any such worms [trichinae] which might be found in our [Alsatian] hogs are not dangerous, and have never caused any infection in man [Menschen] in this locality, probably chiefly because meat is eaten only when it is well cooked.” We shall not stop to show that, since Zündel has not proved that the epidemic of 1877 was not due to the two local hogs, the logical conclusion from his remarks is either (1) that the garrison was not composed of human beings, or (2) that the year 1877 never existed, or (3) that well-cooked meat is the same as raw meat.

As nearly as can be made out, Zündel has reasoned as follows:

1. One outbreak of trichinosis occurred in Diedenhofen among the troops in 1877, as a result of eating raw pork.

¹“Auch Trichinen sind bis jetzt auf einheimischen Schweinen noch nicht gefunden, so auch nicht auf den fremden hier lebendig eingeführten Schweinen. Es kommt dies wohl meist daher, dass das frische Fleisch nur selten auf diese fadenförmige Würmchen microscopisch untersucht und dass daher etwa vorhandene Trichinen nicht gesehen werden. Aber auch diese etwa bei unsern Schweinen vorhandenen Trichinen sind nicht gefährlich, haben hier zu Land *nie* eine Infection bei Menschen verursacht, wohl weil das Fleisch nur gut durchgekocht verspeist wird.

“In dem amerikanischen Schweinefleisch, welches jetzt so massenhaft im Handel ist, werden hingegen Trichinen häufig gefunden und man nimmt an, dass auf 100 Stück gesalzenen oder geräucherten Fleisches oder Specks 2 Mal Trichinen vorhanden sind. Diese Trichinen in amerikanischem Fleisch sind aber sehr oft todt, also nicht mehr fortpflanzungsfähig und gefährlich.

“In Diedenhofen und in Basel vorgenommene Fütterungsversuche mit amerikanischem Fleische, welches sehr trichinös war, blieben bei Schweinen ganz erfolglos; gleiche Versuche in Strassburg mit Kaninchen hatten ebenfalls ein negatives Resultat. Diese Versuche genügen jedoch nicht, um die Unschädlichkeit von allem amerikanischen trichinösen Schweinefleische anzunehmen, da doch Thatsachen von Masseninfectionen (z. B. im Vorjahre beim Militär in Diedenhofen) durch solches Fleisch vorliegen.”—Zündel, 1880, p. 39.

2. Raw pork is never eaten in this locality; only well-cooked pork is eaten.

3. Two local hogs furnished the fresh meat used, and some American-cured pork was also mixed with it.

4. The trichinæ in American cured pork are often dead, and accordingly not capable of reproduction and not dangerous.

5. Experiments with American trichinous pork at Diedenhofen, Basel, and Strassburg (he might have added many other experiments in this line made in Europe) were absolutely negative.

Therefore—

1. The German hogs which furnished the fresh meat in the Diedenhofen epidemic (and which were not examined) were free from trichinæ.

2. Even if they had had trichinæ, these parasites in hogs of this particular region would not have been dangerous, and could not have caused the outbreak, because raw pork is never eaten here.

3. The American-cured pork (which was also not examined) contained live trichinæ.

4. These American trichinæ must have caused the outbreak.

5. Cooking kills the trichinæ in hogs of this locality, but not in American pork.

Further it will be noticed (see p. 151 of this report) that in 1889, the Kreisthierarzt of Hagenau admits that this outbreak was due to German meat.

Is it necessary to discuss this outbreak further? An analysis of Zündel's statement shows that there is absolutely no ground whatever for asserting that the Diedenhofen outbreak was due to American pork.

Crépy-en-Valois, France, 1878.....17 cases, 1 death.

The assertion that this outbreak was due to American meat is absolutely without the slightest foundation.

Laboulbène, 1881, pp. 206-216: French hog.—Chatin, 1883, pp. 134-137: French hog.—Salmon, 1884, p. 478: French hog.—Fränkel, 1891, pp. 1388, 1389: see p. 000 of present report.—Blanchard, 1887, p. 140: French hog.—Wasserfuhr, 1891, p. 250: French hog.

Bremen, Germany, 1879.....3 cases, 0 death.

Lorent (1884 (II), p. 5) records an outbreak due to a *ham which was inspected and passed as free from trichinæ*.¹ He does not state whether this was alleged to be an American or an European ham. Virchow (1884, p. 563) records three cases, diagnosed by Dr. Loose and attrib-

¹ "Ein amtlich bestellter Fleischbeschauer hatte im Jahre 1879 einen Schinken für trichinenfrei erklärt, durch dessen Genuss bei 3 Personen eine ganz leichte Erkrankung an Trichinosis entstand. Nachdem eine medicinalamtliche Nachuntersuchung des Schinkens ergeben hatte, dass von 14 untersuchten Präparaten 10 trichinenhaltig waren, hatte sich derselbe wegen fahrlässiger Körperverletzung vor dem Strafgerichte zu verantworten, welches ihn schuldig fand und zu M. 150 Geldstrafe oder entsprechendem Gefängniss verurtheilte."

uted to American ham (see p. 182 of the present report). No detailed data are given upon which a final opinion may be based.

School-ship "Cornwall," England, 1879----- [43 cases, 1 ? death].

This outbreak was afterwards shown not to be trichinosis.—Power, 1880; Cobbold, 1882, p. 6.—Chatin, 1883, pp. 138, 210: It appears that Chatin considers this a case of trichinosis due to American pork.—Cobbold, 1884: Not trichina but *Pelodera teres*.—Salmon (1885, pp. 479, 485), in describing this outbreak, says:

"The so-called outbreak of trichiniasis on board the English reformatory school-ship *Cornwall* has been much quoted as illustrating the danger of American salted pork, but when closely investigated it proves to be an illustration of jumping at conclusions without evidence, as always seems to have been the case where trichiniasis has been attributed to our meats. This outbreak of disease occurred between September 23 and October 23, 1879, and 43 boys were attacked, out of a total of 262 boys and 15 officers on the ship. The idea that the disease was trichiniasis seems to have been an afterthought, for the only examination made was of the body of one of the boys two months after it had been buried. Drs. Powell and Cory thought they found trichinae in the muscles and concluded the disease must have originated from the American pork which was used on board the ship; but no examination of this pork appears to have been made, and we are not at all certain that English pork was not used as well. Fortunately, specimens taken from the corpse were submitted for examination to that well-known scientist, Dr. Charlton Bastian, and he pronounced the worms not trichinae at all, but a hitherto unknown nematoid, which he classed with the genus *Pelodera*, calling the species *Pelodera setigera*. Dr. Cobbold, who is one of the very best authorities on this subject, asserts very positively that the worm was the *Pelodera teres*, and had probably invaded the body after death. As this worm has never been known to exist as a parasite in the hog, the assumption that the disease was produced by eating pork is an entirely gratuitous one, and the further assumption that it was due to American pork is evidently without the least foundation. * * *

"Another was the disease on the English ship *Cornwall*, which was at first supposed to be typhoid fever, and was only decided to be trichiniasis when a body was exhumed two months after burial, and worms, which the examining physician took to be trichinae, were found in the muscles. But we have it on the very best authority that these worms were not trichinae, and there is no evidence even that they caused the disease. The most probable theory is that they gained access to the body after burial."

Geestendorf, R.-B. Stade, 1880-----More than 7 cases, 0 death.

An outbreak in 1880 in Geestendorf deserves a moment's attention. According to Lorent (1884 (I), p. 67), more than 7 cases, 0 death, occurred, which were due to an American hog imported alive. The hogs were "*not sufficiently* inspected," from which it would appear that the outbreak was due to meat inspected in Germany and passed as free from trichinae. Lorent says:

"Im October 1880 wurden bei einem hier geschlachteten Schweine Trichinen gefunden. Dasselbe gehörte einer Partie Schweine an, welche ein Viehhändler aus Hannover mit dem Dampfer "Kronprinz" von Amerika hatte kommen lassen, und war dasselbe hier verkauft worden. Der Fleischbeschauer hatte unter 90 Objecten 3 Trichinen gefunden. In Bremerhaven war diese Einfuhr lebender amerikanischer

Schweine nicht ohne Folgen gewesen. Es wurde durch die Untersuchung erwiesen, dass Fleisch verkauft worden war, ohne dass die erforderliche mikroskopische Untersuchung vorgenommen war, was auch zur Bestrafung des Verkäufers führte. Ein Schlachter in dem Nachbarorte Geestendorf hatte im October von den eingeführten Schweinen sechs halbe gekauft, bei denen die Trichinenschau ungenügend vorgenommen war. Ein Theil des Fleisches wurde verkauft, der Rest in der eigenen Familie genossen. In letzterer sind vier der Mitglieder an Trichinose erkrankt und ausserdem noch in drei Familien eine Anzahl Erkrankungen vorgekommen."

This outbreak can have no bearing on the American pork question, as the hog was imported alive; and, further, it was apparently inspected in Germany and passed as free from trichinæ.

Brussels, Belgium, about 1880..... 1 case, 0 death.

Boulengier (1887, pp. 201-204) records a case in hospital where trichinæ were found postmortem. It is argued that the infection must have taken place about seven years previously and that the after symptoms had lasted a long time. Under these circumstances trichinosis can hardly be looked upon as the direct cause of death. The patient was a German who had lived in Belgium since 1870. Boulengier intimates¹ that he believes the man became infected from American pork, but this is simply a supposition on his part, and proof is totally lacking.

Barcelona, Spain, 1880.....? cases, 6 deaths.

According to Blanchard (1887, p. 142) 6 persons died in Barcelona after eating American pork. The details regarding this outbreak I have not yet been able to trace, but Somoza (1880, p. 355) refers to outbreaks in Villar del Arzobispo (1876: 28 cases, 6 deaths), Lora de Estepa (1878: 6 cases, 3 deaths), Sevilla, Cadiz, Barcelona, and other places, and remarks further on:²

"* * * But it is the case that all the observations of trichinosis in our peninsula have been traced back to hogs born and bred in Spain."

Judging from this quotation, the Barcelona outbreak can hardly be looked upon as having been definitely traced to American pork.

¹"Le diagnostic était donc de plus évident; il s'agissait d'un cas d'entérite suraigue ou de choléra nostrum sporadique * * * Il aimait à s'isoler et le moindre effort lui était immédiatement à charge: bref une lassitude générale chronique, habituelle. Il nous sera possible, d'après les données que nous fourniront l'autopsie et les lésions musculaires de la trichinose, de rapporter ces derniers symptômes à la trichinose chronique (p. 204), que dans le courant de l'année 1880 il s'est plaint, pendant un temps assez long, de douleurs musculaires analogues à celles du rhumatisme; que depuis cette époque le travail lui était devenu pénible et qu'il était promptement fatigué. Son patron m'a aussi affirmé que depuis lors date la raucité prononcée de sa voix et enfin, circonstance étiologique évidente, qu'il aimait tout particulièrement le jambon d'Amérique, dont se composaient le plus ordinairement ses repas."

²"* * * Pero es el caso que todas las observaciones de triquinosis recogidas en nuestra península han recaído en cerdos nacidos y criados en España."

Madrid, Spain, 1881.....? cases, 6 deaths.

Chatin (1883b, p. 140) refers to cases in Madrid, which he intimates were due to American pork. He says:

"The autopsy showed the presence of trichinæ in the cadavers of these persons, belonging to the poorer classes and ordinarily consuming large quantities of salted pork of American origin.¹

"In 1881, an epidemic at Madrid, caused by American [meats]: 6 deaths. It is because of this that Spain took action before us, and that she prohibited the entrance into her territory of American meats."²

V. & A. (1881, p. 70) mention that trichinæ were found in some cadavers about 1881, which were destined for study in the medical faculty of Madrid.

Further references to alleged cases in Madrid are given in *La Clínica de Málaga*, 1883, pp. 127, 132:

"Nor should what happened right here in Madrid be forgotten; another farce of trichinosis solemnly given the lie by our illustrious and beloved friend, Dr. Chicote, in official papers, to which the fabricators of the illness have had nothing to reply.³

"In writing the article published in *La Correspondencia Médica* the 8th of March, the author could not have seen the one which appeared in the *Gaceta Médica Catalana* seven days later. Belief in a thing can not be forced upon one. Science refuses to permit the writer to place credence in this thing, and as there is no human power which can persuade him to do so it therefore results that the writer of these notes, who is also the author of the article of the 8th of March, can not convince himself that the trichinous ham from the United States, which is coincident with the trichinous sausages from Gilena, could not be the occasion of more dangers in other villages and provinces of Spain than those caused in Málaga. He inclines to the belief that an error in judgment has been made, which is as possible in the said city as it was in Madrid not very long ago. And this being certain, he considers the judgment formed an erroneous one. He acts in conformity with his conscience in endeavoring to allay the alarm of the public, an alarm which he believes is not well founded."⁴

¹ "L'autopsie a fait découvrir la présence de trichines dans les cadavres de ces personnes, appartenant aux classes les moins aisées de la population et faisant d'ordinaire une assez grande consommation de porc salé, de provenance américaine."

² Idem, p. 210: "En 1881, épidémie à Madrid, causée par des salaisons américaines: six morts. C'est à cause de cela que l'Espagne a pris les devants sur nous et qu'elle a interdit l'entrée des viandes américaines sur son territoire."—*Statement by Testelin, French Senate, June 20, 1882.*

³ "Tampoco debe olvidarse lo ocurrido aquí en pleno Madrid, con otra farsa de trichinosis solemnemente desmentida por nuestro ilustrado y querido amigo, Dr. Chicote, en documentos oficiales, y á los cuales nada tuvieron que responder los inventores de la enfermedad."

⁴ "Para escribir el articulillo que se publicó en *La Correspondencia Médica* el día 8 de marzo, no pudo ver el autor lo que publicó la *Gaceta Médica Catalana* siete días después. Y como la fé no se impone y cuando la ciencia se resiste á creer, no hay fuerza humana que la persuada, resulta que el autor de estas notas que lo fué también del artículo del 8 de marzo, no puede convencerse de que el jamón triquinoso de los Estados Unidos, coincidiendo con la longaniza también triquinosa de Gilena, no haya podido ocasionar más daños en otros pueblos y provincias de España que los causados en Málaga. Se inclina más á creer que ha habido un error de apreciación, tan posible en dicha ciudad como lo fué en Madrid no hace mucho tiempo. Y siendo cierto como lo es, que considera erróneo el juicio formado, obra en conformidad con su conciencia al procurar desvanecer la alarma del público que creyó y sigue considerando infundada."

These are the only references which I have thus far found to trichinosis in Madrid in 1881, and it is hardly possible to admit the alleged American origin upon bases of such indefinite data. From the number of alleged deaths, the question arises as to whether the Barcelona cases of 1880 and the Madrid cases of 1881 are not identical.

Chemnitz, Germany, 1881..... 1 case, 0 death.

Reinhard, 1883, p. 48: "An isolated case of trichinosis occurred in Chemnitz, in a man who became infected from American bacon on the voyage from America to Germany, and was taken sick immediately after his arrival in his home in Chemnitz."¹

The details in regard to this case are entirely wanting, so that it is impossible to pass judgment upon it. If the patient had been indulging his appetite for raw pork, it is not surprising that his passion secured for him an attack of trichinosis. The German authorities, however, fail to state whether the case was diagnosed clinically or microscopically; whether any trichinæ were found in the pork; whether the patient ate pork only on the steamer, or whether after arriving in Germany he ate German pork before reaching Chemnitz. Indeed, the only facts we find in regard to the case are that this German had eaten some bacon on the ship, and that he was taken sick immediately after his arrival in Chemnitz. The conclusion which some persons would naturally draw from these meager data is that this case was due to American pork. The cautious and thinking person, however, sees a number of other possibilities in this case. It must, of course, be admitted that there is a *possibility* that this case arose from American pork, but it must also be admitted that the burden of proof rests upon the Saxon health authorities, and I can not therefore admit that it has any definite bearing upon the subject of American pork in Germany, especially since it is not even alleged that the infection took place from American pork exported to Germany. Further, the claim that this particular case arose from the bacon eaten on the steamer is an admission on the part of the Saxon authorities that the case was not due to American pork intended for export to Germany.

Düsseldorf, R.-B. Düsseldorf, Germany, 1881... 16 cases, 3 deaths.

This outbreak is alleged by the German Government to have been due to American pork. Quite aside from the fact that it occurred years ago, before the microscopic inspection was instituted in America for pork intended for export to Germany—hence quite aside from the fact that the case occurred under conditions which do not exist to-day (inspection before shipment and reinspection in Germany), and therefore has no direct bearing upon the present discussion—it will be seen

¹"In Chemnitz kam ein vereinzelter Fall von Trichinose bei einem Manne vor, der sich auf der Ueberfahrt von Amerika nach Deutschland auf dem Schiffe durch Genuss von amerikanischem Speck inficirt hatte und unmittelbar nach seinem Eintreffen in seinem Heimathorte Chemnitz erkrankte."

from the following extracts that the opinion of the German Government is not accepted by the foremost sanitarians of Europe. Virchow, Hertwig, Brouardel, Fränkel, and Wasserfuhr have all examined the case and have not accepted the evidence. Ostertag (1895) first followed Virchow, but later (1899) changed his opinion, without stating his reasons.

Virchow, 1884, p. 542: "In the early part of 1881, 16 cases of trichinosis, of which 3 were fatal, occurred in Düsseldorf, all resulting from the consumption of raw ham. The ham in question was designated by the merchant as a Holstein, under which name they are sold from Hamburg. A definite decision regarding this point could not be obtained. The fact that the ham was extremely small does not speak in favor of its being of American import, although suspicion existed that the dealer at that time imported American hams via Antwerp. Nevertheless, this was so uncertain that the Government also took into consideration the possibility that this ham might have come from an American hog imported alive, as such were imported in large numbers in 1880. Enough, it could not be ascertained where the ham came from, in spite of all inquiry."¹

Weiss, 1890, p. 152: Does not discuss the case, and gives only the statistics.

Brouardel, 1883, pp. 1515, 1516: "After having studied the epidemic of Emerleben and vicinity, we have endeavored to inform ourselves regarding the reasons which decided the German Government to prohibit the importation of meat from America.

"We addressed Dr. Struck, president of the imperial health office, and desired to request of him the reports invoked by the organs of the German Government, upon the epidemics of Düsseldorf, Rostock, Bremen, etc. According to the documents, which we add further on, these epidemics should be attributed to American pork. Unfortunately, Mr. Struck was without doubt too occupied, he was not able to receive us.

"Virchow has been kind enough to furnish us information which we think is sufficient to fill the gap. He declared to us in the most formal manner that to his knowledge it was not scientifically demonstrated that the consumption of American pork had given rise to a single isolated case of trichinosis or to an epidemic. Virchow made this declaration to us several times, notably in presence of Hertwig, the veterinary director of the Berlin abattoir, chief of the microscopic inspection at this abattoir, and member of the imperial office. He himself confirmed Virchow's opinions.

"It is very important to note that, following German customs, American pork is eaten raw, and even under these conditions Virchow and Hertwig affirmed that, it had not been demonstrated that a single case of human trichinosis was attributable to this food." [P. 1516] "We regret that we do not possess the documents and the

¹"Im Düsseldorf kamen Anfang 1881 16 Erkrankungen an Trichinose vor, sämtlich in Folge des Genusses von rohem Schinken, von denen 3 tödtlich endeten. Der fragliche Schinken war von dem Händler als ein holsteinischer, wie sie von Hamburg aus in den Kauf gebracht würden, bezeichnet worden. Eine bestimmte Entscheidung über diesen Punkt hat sich nicht gewinnen lassen. Der Umstand, dass der fragliche Schinken auffallend klein und unansehnlich gewesen ist, spricht nicht für amerikanischen Import, obwohl der Verdacht bestand, dass der Verkäufer damals amerikanischen Schinken über Antwerpen bezogen habe. Indess war dies so wenig sicher, dass die Regierung auch die Möglichkeit in Erwägung zog, dass der Schinken von einem lebenden amerikanischen Schwein herkommen könne, wie deren seit 1880 in grösserer Zahl eingeführt sein. Genug, woher der Schinken eigentlich gekommen ist, hat sich trotz aller Nachforschung nicht ermitteln lassen."

official reports of the imperial health office. But this affirmation by the author of the first complete study of trichinosis seems to us of great value. The analysis of the address of Köhler, Government commissioner, at the interpellation by Richter and Rickert, who demanded in the Reichstag session of January 9, 1883, the repeal of the prohibition, does not contain any scientific argument, but on the contrary [it contains] phrases which seem to testify that the reporters of the imperial office had to make serious reservations."

"Here is a translation of the passages which contain the statements relative to hygiene. The end of the response seems to indicate that the question under debate had another interest, and that the struggle had occupied the scientific field only a moment, to retake its place among the questions of protection or free trade.

"Analysis of the speech by the Government councillor:

"It has been found that the epidemic at Düsseldorf (1881) was, according to a communication of the Royal Prussian Government, of American origin. (15 cases, 3 deaths.)

"Also at Bremen, at Rostock, one may accuse American meat.

"But the proof of this accusation is exceedingly difficult to furnish because" [diagnosis difficult; American meats mixed and sold as German sausage, etc.]

¹ "Après avoir étudié l'épidémie de Emersleben et de ses environs, nous avons tenu à nous informer des raisons hygiéniques qui avaient décidé le gouvernement allemand à prohiber l'introduction des viandes d'Amérique.

"Nous nous étions adressés à M. le docteur Struck, président de l'office impérial de santé, et nous voulions lui demander communication des rapports invoqués par les organes du gouvernement allemand sur les épidémies de Dusseldorf, Rostok, Brême, etc. D'après les documents que nous joignons plus loin, ces épidémies auraient été attribuées à la consommation de viandes porcines américaines. Malheureusement, M. Struck était sans doute trop occupé, il n'a pas pu nous recevoir.

"M. Virchow a bien voulu nous fournir quelques renseignements qui, nous le pensons, suffisent à combler cette lacune. Il nous a déclaré de la façon la plus formelle que, à sa connaissance, il n'était pas scientifiquement démontré que la consommation de la viande porcine américaine eût donné naissance à un seul cas de trichinose humaine isolé, ou à plusieurs simultanés développés en forme d'épidémie.

"M. Virchow nous a plusieurs fois fait cette déclaration, notamment en présence de M. Hertwig, vétérinaire directeur de l'abattoir de Berlin, chef de service de micrographie pour la recherche de la trichine à cet abattoir, membre de l'office impérial: lui-même a confirmé les opinions de M. Virchow.

"Ils est très important de noter que, suivant les habitudes allemandes, le porc américain est consommé cru et que, même dans ces conditions, MM. Virchow et Hertwig affirment qu'il n'est pas démontré qu'un seul cas de trichinose humaine soit imputable à cette ingestion.

"Nous regrettons de ne pas posséder les documents et rapports officiels de l'office impérial de santé. Mais cette affirmation de l'auteur de la première étude complète sur la trichinose nous semble d'une grande valeur. L'analyse du discours prononcé par M. le conseiller aulique Köhler, commissaire du gouvernement confédéré, à une interpellation de MM. Richter et Rickert qui, dans la séance du 9 janvier 1883 du Reichstadt, demandaient la levée de la prohibition, ne contient aucun argument scientifique, mais au contraire des phrases qui semblent témoigner que les rapporteurs de l'office impérial avaient dû faire de sérieuses réserves.

"Voici la traduction des passages qui renferment des affirmations relatives à l'hygiène. La fin de la réponse semble du reste indiquer que la question débattue avait un intérêt autre et que la lutte n'avait occupé qu'un moment le terrain scientifique pour reprendre sa place naturelle parmi les questions de protection ou de libre échange.

"Analyse du discours de M. le conseiller aulique du gouvernement. "On a trouvé

Wasserfuhr, 1891, pp. 248, 249: "In order, therefore, that an article of food may be designated 'injurious to health,' and in order to justify a sanitary police interference with its traffic, it is necessary that the same has, from experience, if not usually, still at least repeatedly, caused cases of sickness and death.

"Has this proof been brought forward with reference to the American pork (hams, bacon, etc.) imported into Germany?"

"Not in the slightest! We have, indeed, heard many complaints from the defenders of the prohibition regarding the extensive distribution of trichinosis and cholera among the American hogs, regarding the poor organization of the veterinary police and of the meat inspection in the United States, as well as regarding the faulty preparation of the pork exported from there. But complaints of this nature, such as are pushed to the fore by that side, are—except that they are more or less contradicted by other parties—secondary, lead the public astray, and are of no importance in connection with the subject in hand, namely, the question regarding the injurious influence of those wares. Dr. Barth has already very properly brought forward this point in the Reichstag session of January 9, 1883. He said (according to the stenographic report): 'What, in my opinion, was the task of the federated Government in this matter? The cardinal question was a list, or at least an approximately exact report, of the cases and deaths which were traced to the consumption of American

que l'épidémie de Dusseldorf (1881) était d'près une communication du gouvernement royal prussien, d'origine américaine (voy. Archives) (15 cas et 3 morts).

"De même à Brême, à Rostock, on peut accuser la viande américaine.

"Mais la preuve de cette accusation est excessivement difficile à fournir parce que:

"A. Le diagnostic de la trichinose est difficile, celle-ci étant récemment étudiée et ressemblant à d'autres maladies.

"B. La viande américaine, fumée et très peu salée, est mélangée, accommodée, vendue sous le nom de saucisses et saucissons allemands (p. 422).

"M. Köhler continue et insiste sur l'impossibilité d'un examen sérieux du porc américain à la frontière: dissémination des morceaux, etc.

"Et cependant cette viande serait d'autant plus dangereuse, qu'elle porterait désormais l'estampille officielle.

"Nous pourrions recommander au public de ne pas manger de viande de porc américain sans la soumettre à la cuisson, qui est certainement le moyen le plus sûr pour tuer la trichine.—Mais si les Américains, les Anglais, les Français ne mangent qu'avec dégoût du porc incomplètement cuit, nos Allemands aiment beaucoup la viande crue ou peu cuite du porc.

"Cependant nous ne pouvons pas, par des lois, changer le goût du pays. Ces lois seraient inutiles et porteraient atteinte à la liberté individuelle.—Ce serait un contresens.

"Une loi de prohibition est donc légitime et nécessaire. D'ailleurs d'autres États, France, Autriche-Hongrie, Italie, etc., ont voté ces lois.

"Elles devront être temporaires et subordonnées à l'état des marchandises américaines. Que le commerce américain prenne ses précautions, examine ses porcs, surveille leur nourriture, etc., ces lois deviendront alors inutiles.

"Les inconvénients des lois de prohibition sont réfutées par la statistique suivante: En 1880, l'importation du porc frais a été de 23,962,200 kilogrammes, l'exportation de 5,645,300 kilogrammes, d'où excédent énorme de 18,316,900 kilogrammes d'importation. Supposons que trois quarts d'excédent de cette importation soient de viande américaine, on aura 13,000,000 de kilogrammes environ.

"En 1881, l'importation américaine se réduit à 10,000,000 de kilogrammes environ.

"En 1882 (jusqu'en octobre), importation 6,000,000 de kilogrammes environ. Exportation, 5,000,000 de kilogrammes. Différence en faveur de l'importation: 1,000,000 de kilogrammes environ."

pork. (Quite right! left.) All else is secondary in comparison—is, in fact, a direct proof on the other side. For the more trichinæ are eaten in American meat, and the fewer cases of sickness traced in spite of this (calls of Quite right!), so much the more is proof presented that disease is not caused by eating trichinous American meat.' In opposition to this, no other statements founded on facts are found in the Reichstag proceedings of 1883 regarding the injurious action of American meats, except those of the Bundesrath commissioner, who (according to the stenographic reports) expresses himself as follows: 'According to an official communication of the Royal Prussian Government there occurred, for instance in 1881, in Düsseldorf, 15 cases of disease—of these, 3 with fatal termination—which were proved to be due to eating an American ham. Similar cases [literally, establishments] have taken place in former years—for example, I recall in Bremen and Rostock—so that the proofs which are missed by Herr Richter, that in reality the American trichinæ are dangerous, may therefore be [looked upon as] presented.'

"Such indefinite statements can not convince a doubter. Further, it is known that they have later, so far as American pork is concerned, and as a result of exact investigations by expert physicians, turned out to be in part erroneous, in part unproved. It is probably only because of not being acquainted with these medical investigations, in which Virchow and others have taken part, that it is to be explained that a State minister, who according to his own statement was able to inform himself only from the records, declared again, with great certainty, in the Reichstag session of January 22 of this year, that it was a fact, and indisputably proved, that trichinosis had broken out in different places in Germany from eating American pork."¹

¹ "Um also ein Nahrungsmittel als Gesundheitsschädlich bezeichnen zu dürfen und um ein sanitäts-polizeiliches Einschreiten gegen den Verkehr mit demselben zu begründen, ist nothwendig, dass dasselbe erfahrungsgemäss, wenn nicht gewöhnlich, so doch mindestens wiederholt Erkrankungen und Tod thatsächlich veranlasst hat.

"Ist dieser Nachweis von dem nach Deutschland eingeführten amerikanischen Schweinefleisch (Schinken, Speckseiten u. dgl.) erbracht worden?

"Nicht im mindesten! Man hat zwar von den Vertheidigern des Einfuhrverbots viele Klagen gehört über die grosse Verbreitung von Trichinose und Cholera unter den amerikanischen Schweinen, über die schlechte Organisation der Veterinärpolizei und der Fleischschau in den Vereinigten Staaten, sowie über die mangelhafte Zubereitung der von dort ausgeführten Schweinefleischwaaren. Aber Klagen dieser Art, wie sie von jener Seite in den Vordergrund geschoben werden, sind—davon abgesehen, dass ihnen von anderen Seiten mehr oder weniger widersprochen wird—nebensächlich, führen nur das Publikum irre und sind für die Entscheidung der Frage, auf welche es ankommt, nämlich der Frage nach der gesundheitsschädlichen Wirkung jener Waaren gleichgültig. Sehr richtig hat dies bereits der Abgeordnete Dr. Barth in der Reichstagssitzung vom 9. Januar 1883 hervorgehoben. Er sagte (nach den stenographischen Berichten): "Was meines Erachtens die Aufgabe der hohen Bundesregierungen gewesen wäre bei dieser Frage, die Cardinalfrage, das wäre ein Verzeichniss oder wenigstens eine annähernd genaue Angabe der constatarnten Erkrankungen, beziehungsweise der Todesfälle auf Grund des Genusses von amerikanischem Schweinefleisch. (Sehr richtig! links.) Alles andere ist demgegenüber Nebensache, ist sogar zum Theil ein directer Gegenbeweis. Denn je mehr Trichinen in amerikanischem Fleische genossen werden, und je weniger Krankheitsfälle trotzdem constatirt werden (Rufe: Sehr richtig!), um so mehr ist der Beweis geliefert, dass durch den Genuss von trichinenhaltigem amerikanischen Fleische Krankheiten nicht hervorgerufen werden." Demgegenüber finden sich in den i. J. 1883 stattgehabten Reichstags-Verhandlungen über gesundheitsschädliche Wirkung amerikanischer Fleischwaaren keine anderen thatsächlichen Angaben als diejenigen eines Commissars des Bundesraths, welcher sich (nach den stenographischen

Fränkel, 1891, pp. 1388, 1389: "It is not different with the second case, which was reported from Düsseldorf. There are said to have been taken sick there in 1881, as a result of eating raw ham, 16, according to a letter for which I am indebted to the kindness of the Kreisphysikus, Geheimrath Zimmermann in Düsseldorf—13 persons, 3 of whom died. But the origin of the suspected meat, which came from Hamburg, could not be determined with certainty. Perhaps results would have been obtained if a more exact examination had been made, results similar to those of the case mentioned by Wasserfuhr, where a small trichinosis epidemic in Crépy-en-Valois in 1878 gave to the French high protectionists the handle for a prohibition of the importation of American meat, [and it was shown] that the guilty hog was not, as stated, an American, but a Norman. Those, therefore, are the two feet upon which later the Colossus of the prohibition was raised. It is not entirely easy not to write a satire."¹

Mosler & Peiper, 1894, pp. 279, 280: "The possibility that trichinosis can be caused by the consumption of American meat is accordingly not excluded. As a matter of fact, cases of trichinosis which are traced to American hams or bacon have occurred only sporadically. Focke records that in Bremen 12 persons were taken sick from eating an American ham, and later 8 other persons. In 1881 16 persons in Düsseldorf were taken sick with trichinosis after the consumption of raw ham; 3 died. The ham in question came from Hamburg; its origin could not be traced.

Berichten) folgendermaassen äusserte: "Nach einer amtlichen Mittheilung der kgl. preussischen Regierung sind z. B. i. J. 1881 in Düsseldorf 15 Erkrankungen, davon 3 mit tödtlichem Verlauf vorgekommen, die nachgewiesenermaassen auf den Genuss amerikanischer Schinken zurückzuführen waren. Aehnliche Feststellungen haben in früheren Jahren, wie ich mich z. B. erinnere, in Bremen und Rostock, stattgefunden, so dass also die von dem Herrn Abgeordneten Richter vermissten Beweise, dass wirklich die amerikanischen Trichinen gefährlich seien, erbracht sein dürften." So unbestimmte Angaben können keinen Zweifler überzeugen, haben sich übrigens später, soweit amerikanisches Schweinefleisch dabei in Betracht kommt, in Folge der von sachverständigen Aerzten vorgenommenen genauen Nachforschungen bekanntlich theils als irrtümlich, theils als unerwiesen herausgestellt. Es ist wohl nur aus der Unbekanntschaft mit diesen ärztlichen Nachforschungen, bei welchen u. A. auch Virchow sich betheiligt hat, zu erklären, wenn einer der Herren Staatssecretäre, welcher seiner eigenen Angabe nach nur aus den Akten sich hatte informieren können, noch in der Reichstags-Sitzung vom 22. Januar d. J. mit grosser Sicherheit die irrende Behauptung aufgestellt hat, es sei unlängbar und thatsächlich festgestellt, dass die Trichinose an verschiedenen Orten Deutschlands durch den Genuss amerikanischen Schweinefleisches ausgebrochen sei."—*Wasserfuhr, 1891a, pp. 248, 249.*

¹ "Nicht anders steht es mit dem zweiten [p. 1389] Fall, der aus Düsseldorf berichtet wurde. Dort sollten 1881 infolge des Genusses von rohem Schinken 16—nach einer brieflichen Mittheilung, die ich der Liebenswürdigkeit des Herrn Kreisphysikus, Geheimrath Zimmermann in Düsseldorf, verdanke—13 Personen erkrankt, 3 gestorben sein. Aber die Herkunft der verdächtigen Fleischwaare, die aus Hamburg bezogen war, lässt sich mit Sicherheit nicht mehr ermitteln, und vielleicht wäre man bei genauerer Prüfung des Thatbestandes auch hier zu einem ähnlichen Ergebniss gelangt, wie in dem von Wasserfuhr (Hyg. Rundschau, p. 250) angeführten Falle, 'wo eine im Jahre 1878 in Crépy-en-Valois ausgebrochene kleine Trichinenepidemie den französischen Schutzzöllnern die Handhabe zum Verbot der Einfuhr amerikanischen Schweinefleisches gab, es sich aber schliesslich herausstellte, dass das schuldige Schwein nicht, wie behauptet worden, ein amerikanisches, sondern ein normannisches gewesen war.' Das also sind die beiden Füsse, auf denen sich später der Koloss des Einfuhrverbotes erhob—es ist nicht ganz leicht, keine Satire zu schreiben!"

According to Virchow, the published cases are not given in so complete a scientific form that they can be the subject of a serious criticism."¹

Ostertag, 1895, p. 418: "After it has formerly been pointed out, especially by Virchow, that with exception of a (by no means free from criticism) observation in Bremen, no certain case of trichinosis could be traced to eating American salted pork."²

Ostertag, 1899, p. 506: "Further, [an outbreak of] trichinosis occurred in Düsseldorf after the consumption of American meat."³

Liège (province), Belgium, 1882 11 cases, 0 death.

According to Blanchard (1887, p. 141), this outbreak was due to American pork. He says:

"The disease is, so to speak, unknown in Holland and Belgium. In this last-named country we shall mention an epidemic, due to the use of American salted meats, which occurred in 1882 in the province of Liège and attacked 11 persons."⁴

The only other reference I have found to this outbreak is one by Chatin (1883, p. 210) to a statement by M. Testelin in the French Senate, who is quoted as having said: "Finally, a seventh epidemic occurred in the province of Liège, in Belgium; eleven persons were attacked."⁵ Until more definite details are found, this outbreak hardly deserves serious attention.

Marshall, 1882 (?) cases, 3 deaths.

According to Chatin (1883, p. 210), M. Testelin also referred to three deaths in Marshall which were alleged to have been caused by American pork. I have been unable to trace this outbreak.

Cologne, R.-B. Cologne, 1883 1 case, 0 death.

Bouley (1884, p. 395) cites a case in Cologne. I am unable to find any other mention of this case in the official or other reports unless it

¹ "Die Möglichkeit, dass durch den Genuss amerikanischen Schweinefleisches Trichinosis hervorgerufen werden kann, ist demnach nicht auszuschliessen. Thatsächlich werden allerdings Erkrankungen an Trichinosis, welche auf Genuss von amerikanischen Schinken oder Speck zurückgeführt sind, nur ganz sporadisch vorgekommen sein. Focke berichtet, dass in Bremen durch den Genuss eines amerikanischen Schinkens 12 Personen, später noch weitere 8 erkrankt sein. Im Jahre 1881 erkrankten nach dem Genusse von rohem Schinken in Düsseldorf 16 Personen an Trichinosis, 3 starben. Der fragliche Schinken war aus Hamburg bezogen, seine Herkunft liess sich nicht ermitteln. Nach Virchow sind die angeführten Fälle nicht in so ausführlicher wissenschaftlicher Form veröffentlicht, dass sie Gegenstand ernster Kritik sein können."

² "Nach dem schon früher, namentlich durch Virchow, darauf hingewiesen worden war, dass mit Ausnahme einer durchaus nicht einwandsfreien Beobachtung aus Bremen noch kein sicherer Fall von Trichinosis auf den Genuss gesalzenen amerikanischen Schweinefleisches habe zurückgeführt werden können." * * *

³ "Ausserdem ist in Dusseldorf eine Trichinosis nach Genuss amerikanischen Schweinefleisches ausgebrochen."

⁴ "La maladie est, pour ainsi dire, inconnue en Holland et en Belgique. Dans ce dernier pays, nous signalerons une épidémie, due à l'usage de salaisons américaines, qui a éclaté en 1882 dans la province de Liège et a frappé 11 personnes."

⁵ "Enfin, une septième épidémie a éclaté dans la province de Liège, en Belgique; elle a frappé onze personnes."

is the one quoted by Schwartz in his report for 1882¹ as a "proof" that trichinæ in imported American pork are alive. This so-called "proof" is as follows: A *cat* stole a piece of trichinous American pork from an inspector. Later the cat was killed and found to contain trichinæ. Forgetting that cats eat mice and rats, and that these animals are frequently infected with trichinæ, Schwartz concludes that the case is here proved against American pork. Quite aside from the possibility or even probability that the cat became infected from mice or rats, it may be suggested that as this cat belonged to a trichina inspector it is not at all impossible that it might have eaten German pork which the inspector in question had "inspected and passed as free from trichinæ."

Possibly Bouley referred to the alleged outbreak of 7 cases in Cologne discussed below. (See also p. 178.)

Malaga, Spain, February–March, 1883..... 1 case, 1 death.

Early in 1883, an epidemic of about 26 cases, 3 deaths, which occurred in Malaga, appears to have created a commotion in Spain which almost bordered upon a panic similar to the trichinosis scare which occurred in Germany in 1860–1865. The various original accounts given by Spanish writers are somewhat confused, so that it is difficult to give the exact extent of the outbreak. As nearly as can be made out, about 26 cases occurred, 4 of which were fatal. It appears, further, that all of the patients ate raw pork sausage coming from Gilena, and that one patient had also eaten of an American ham. It appears, further, that trichinæ were found both in the remnants of the sausages and of the ham. Some authors have, on basis of these facts, assumed that one patient became infected from the ham (although it is definitely stated that she had eaten "raw sausage" at various times), while the others became infected from the sausages. The reason for this assumption is not apparent.

The first reference to the outbreak appears to be the article by Antonio Linares Henríquez (1883, pp. 141–144), who refers to 6 cases, with 2 deaths. In connection with 4 of the patients he states that "Almost all had eaten pork sausage and had not cooked it in metal vessels."² In referring to a fifth case (fatal), he says: " * * * for I knew that the sick woman had eaten ham, not of the country, Ameri-

¹ "Zum Beweise, dass auch die im amerikanischen Fleisch gefundenen Trichinen nicht immer todt und unschädlich geworden sind, mag die Mittheilung des Kreis-Physikus Dr. Winckel in Mülheim dienen, nach welcher einem dortigen Fleischschauer während der Untersuchung trichinenhaltigen amerikanischen Fleisches durch seine Katze ein Fleischstückchen geraubt und gefressen wurde. Die Katze wurde nach mehreren Wochen getödtet und voll von Trichinen gefunden."—Schwartz, 1883, p. 32.

² "Casi todos habían comido la carne de cerdo en embutidos (longaniza) y no habían guisado en vasijas metálicas."

can.”¹ Chatin (1883, pp. 498-490) refers, in a meeting of the French Academy of Medicine, to Henríquez’s paper, and states that, for one case, the source was traced to an American ham, a conclusion not entirely justified by Henríquez’s words.¹ Henríquez’s paper is translated in the *Gaz. Hebdomad. de Méd. et de Chir.*² It may be mentioned that in the case alleged to have been due to American ham, no postmortem was held. Trichinæ were, however, found both in the sausages and in the ham. An editorial in the *N. Y. Med. Journ.*, XXXVII, p. 577, based upon the French article just referred to, states that “In one instance the patient was known to have eaten of American ham, and the ham was found trichinous.” In July, Dr. Francisco Linarez Enríquez (1883, pp. 405-408) mentions 8 cases, 1 death, which occurred in February and March. It is not clear that any of these are identical with the 6 cases, 2 deaths, referred to above. Sausage purchased of a known dealer is given as the alleged source of infection, and American meat is not mentioned.

Francisco de Martos Pérez (1883, pp. 51-55) mentions 2 patients who had eaten raw sausages.

An article entitled “La trichinosis en Málaga,” which appeared in *La Correspondencia Médica*, No. 8, March, 1883, and was copied in *La Clínica de Málaga*, 1883, pp. 127-129, discussed the outbreak in rather a sarcastic manner. In speaking of the press reports it says that three versions were current, namely:

(1) “As for having introduced trichinous ham coming from America, various persons who had eaten it had been attacked by the illness, of whom 7 had already died;

(2) “That trichina had also been found in some sausages coming from Gilena, which so alarmed the people that no one dared to eat pork;

(3) “And last, that the illness is already conquered in Malaga; that the sole origin of this was the sausages from Gilena, and not the North American ham; that although the sufferers reached the number of 20, only 3 had died, and the others, it is supposed, had recovered. (What a tale!) Finally, that if, among the people of Alameda, in the same province, some alarm was produced by the effects brought about by the pork eaten by some persons, a medical examination proved that although the woman was ill, the illness was not trichinosis.”³

1 “* * * pues supe que la enferma había comido jamón, no del país, americano.”

²The two passages (see footnotes 1 and 2) in question are rendered as follows: “Presque toutes les malades se rappelaient avoir mangé de la viande de porc hachée (saucisses); on n’avait pas employé de vases métalliques pour la cuisson.”—“J’eus alors l’occasion de confirmer mon diagnostic, car j’apprenais que le malade avait mangé d’un jambon, non pas du pays, mais bien américain.”

³(1) “Que por haberse introducido jamón trichinoso procedente de América; habían sido atacadas de la enfermedad varias personas que lo habían comido, de las cuales habían fallecido ya siete.

(2) “Que también se habían encontrado trichinas en unas longanizas procedentes de Gilena, por lo que, alarmada la población nadie se atrevía á comer carne de cerdo.

(3) “y último. Que ya está dominada la enfermedad en Málaga. Que el único origen de ella fué la longaniza de Gilena y no ya el jamón norte-americano. Que

The author intimates that the agitation against pork is supported by commercial rather than hygienic interests. This article called forth two replies by Antonio de Linares Enríquez, in *La Clínica de Málaga*, 1883, pp. 129-139 (see also p. 175 of present report). Some further details regarding the cases are given; and it appears that in connection with the alleged American origin of the ham he made no extensive investigation, but simply accepted a statement made to him, for he says: "Having examined a very small piece of ham, which was said to me to be American. * * *"¹

Fidel Fernández Osuna (1883, p. 237), in referring to trichinosis in Spain, says:

"Since 1875, the date on which the mournfully celebrated events at Villa del Arzobispo gave the note of alarm, trichina has been observed in Spain in different places and at different dates; in Barcelona, Seville, Lora, Cordoba, and at present in Malaga and Valencia. The hogs, the flesh of which has been the cause of the illness, are native, and it is to be feared that trichinosis exists in many other places, for, in accordance with the extent of its study, new cases will be discovered."²

Aurelio Abela (1883, pp. 41-51) says there were about 25 cases, with 3 deaths. Regarding the source of infection, he remarks:

"Only in the sausage coming from Gilena was found trichina, and this in as many preparations as were made. All the persons attacked, including the three whose lives were sacrificed, ate of the same sausage (p. 46).³ Only in the sausage from Gilena, of which the persons who were attacked had eaten, was it possible to discover trichina (p. 51)."⁴

Joaquín Pérez Risueño (1884, pp. 214-224) discusses in detail the outbreaks which have occurred in Spain, and says in regard to the Malaga epidemic that there were in all⁵ more than 26 cases, 3 of which were fatal.

aunque los atacados han sido hasta el número de 20, sólo han fallecido 3 y los demás se les supone curados (¡Cuanta patraña!). En fin, que si en el pueblo de Alameda, de la misma provincia, se produjo alguna alarma, por los efectos que produjo la carne de un cerdo en algunas personas que lo comieron, del reconocimiento facultativo resultó que el dicho estaba enfermo, no trichinado."

¹ "Examinados en ésta su casa un trozo de longaniza de la que habían comido los enfermos de la calle de Mármoles y una pequeñísima cantidad de jamón, que se me dijo ser americano, casa de la enferma de la calle de los Friales. * * *"

² "A partir de 1875, fecha en la cual los hechos tristemente célebres de Villar del Arzobispo dieron la voz de alarma, se ha observado la triquina en España en diversos puntos y fechas. En Barcelona, Sevilla, Lora, Córdoba, y actualmente en Málaga y Valencia. Los cerdos cuyas carnes han producido la enfermedad son del país, y es de temer que exista la triquinosis en muchos otros puntos, pues á medida que se vulgariza su estudio se descubren nuevos casos."

³ "En la longaniza procedente de Gilena, es donde únicamente se ha encontrado la triquina, y esto, tantas veces cuantas de ella se han hecho preparaciones microscópicas. De este embutido comieron todos los atacados incluso los tres á quienes les ha costado la vida y estamos persuadidos (p. 46).

⁴ "Solo en la longaniza de Gilena, de la cual han comido los que fueron atacados, ha sido posible descubrir la triquina."

⁵ "Nuevos casos de triquinosis fueron observados al día siguiente por el distinguido médico, á quien de derecho pertenece el honor de su descubrimiento en Málaga.

In referring to one case observed by Dr. Linares Henriquéz, he says:

"Going to the home of the sick woman, Friars street, No. 30, he observed the same combination of symptoms in a woman 30 years old, of a good constitution. Her illness had begun some fifteen days before. The sick woman had eaten ham from America, and raw sausages at different times."¹

It would appear, therefore, that the statement that this case was due to American meat is nothing more than an assumption.

Valencia, Spain, March-April, 1883 ----- 6 cases, 1 death.

Blanchard (1887, p. 142) in recording the Barcelona cases, adds:

"More recently, Ferrer y Genovés has published a large number of observations made at Valencia on persons using American pork."²

It will be noticed that Blanchard does not directly state that these cases were due to American meat, and upon referring to Ferrer y Genovés (1883, 1884), I have failed to find that he claims that they were of American origin. He says (1883, p. 512):

"New and careful questioning gave as a result (according to their recollection of the pork) that all this family had eaten some days before their illness, some sausages bought in a pork shop some distance from Valencia."³

In speaking of patients in Torreón, No. 2, it appeared that they also had eaten meat from the same hog.⁴ The same outbreak is referred to by both Gómez y Rieg (1883, pp. 98, 99) and by Risueño (1884, p. 224), neither of whom appears to attribute the outbreak to American meat. The former states that the "fact existed that they had used for their supper certain sausages dried, some raw, some cooked, which had been bought outside of the city in that part called Orriols. * * * All the the sausages have same origin," while the latter says that the "only exclusive cause was the eating of pork and sausages, in which afterwards trichinæ were found." There occurred in Algimia 3 cases,

Un pariente de la familia de calle de Mármoles, había adquirido embutidos de igual procedencia, y al ir á verle á su casa, Corralón de Santa Bárbara, número 5, encontró 7 enfermos más atacados de este parasitismo. Y no fueron los que hasta aquí hemos citado los únicos casos de la infección: la contrajo también una señorita hermana de la enferma de la calle de los Frailes y además su criada; presentaronse luego varios casos, unos veintiseis entre todos, sin contar algunos otros que por su poca entidad habían pasado desapercibidos [p. 221]."

¹"Trasladado á la casa de la enferma, calle de los Frailes, número 30, observó el mismo cuadro de síntomas en una señora de unos 30 años de edad, de buena constitución; el padecimiento había empezado unos quince días antes, y la enferma había comido jamón procedente de América, y longanizas crudas varias veces" [pp. 220, 221].

²"Plus récemment, Ferrer y Genovés a publié un grand nombre d'observations, faites à Valence chez des individus faisant usage de porc américain."

³"Nuevo y minucioso interrogatorio da por resultado (al recordar las carnes de cerdo) que toda esta familia había comido, días antes de enfermar, unas longanizas compradas en una tocinería algo distante de Valencia."

⁴"Que también habían comido carnes al parecer del mismo cerdo.—Ferrer y Genovés" [1883, p. 513].

1 death, among persons who had eaten of the same sausages as the people in Valencia.

From the above evidence, it is not clear that these cases were due to American meat.

Cologne, R.-B. Cologne (year?) ----- 7 cases, ? death.

Wasserfuhr, 1891a, pp. 249, 250: "Only in the Regierungsbezirk Cologne, according to a statement made by the same State minister in the Reichstag session of January 23, 7 cases of trichinosis are said to have recently occurred which could be traced to American pork. It is not possible at present to test the correctness of this statement; not even the place or the date of the occurrence was named. In spite of this, the speaker believed he could utilize this as important proof of the dangerous character of American pork. On the contrary, one is justified in doubting the matter, so far as the relations of American meat are concerned, until the official report appears, which the Royal Government in Cologne has ordered, and which is not yet completed and not yet known."

From the above it results that a sufficient proof that the consumption in Germany of American pork has as a rule or in a number of cases caused sickness or death has not been brought forward. A prohibition of its importation on this account because of sanitary grounds can not be justified.¹

No further reference to this outbreak has been found. An important fact to be noticed is that no mention of it appears to be made in any of the official health reports of the Reg.-Bez. Cologne. Yet if the investigation ordered by the Government at Cologne had revealed the fact that these alleged cases ever actually existed or that they were traced to American meat, it is not unreasonable to assume that they would at least be recorded in one of the Cologne health reports.

"Nixe" outbreak, 1891----- 17 cases, 0 death.

In connection with the Bremen statistics it may be well to refer to an outbreak on the Bremen bark *Nixe*, 17 cases, 0 death, reported for 1891, and alleged by some parties to have been due to American salt

¹"Nur im Regierungsbezirk Köln sollen nach einer von demselben Herrn Staatssecretär in der Reichstagssitzung vom 23. Januar gemachten Mittheilung in jüngster Zeit 7 Fälle von Trichinose vorgekommen sein, welche auf den Genuss amerikanischen Schweinefleisches zurückgeführt werden konnten. Eine Prüfung der Richtigkeit dieser Angabe ist zur Zeit nicht möglich; es wurden nicht einmal Ort und Zeit jenes Vorkommnisses genannt. Trotzdem glaubte der Redner dasselbe als wichtigen Beweis für die Schädlichkeit des amerikanischen Schweinefleisches verwerthen zu können. Man ist im Gegentheil berechtigt, den Thatbestand, soweit er sich auf amerikanisches Fleisch bezieht, so lange zu bezweifeln, bis die amtlichen Erhebungen vorliegen, welche die Königliche Regierung in Köln angeordnet hat, und welche zur Zeit noch nicht abgeschlossen und noch nicht bekannt geworden sind.

"Aus dem Vorstehenden ergibt sich, dass ein genügender Nachweis, der Genuss amerikanischen Schweinefleisches in Deutschland habe in der Regel oder doch in zahlreichen Fällen Erkrankung oder gar Tod bewirkt, nicht geführt ist, ein Verbot der Einfuhr desselben daher durch sanitäre Gründe nicht gerechtfertigt werden kann."—*Wasserfuhr*, 1891a, pp. 249, 250.

pork. It will suffice if the following article by Wasserfuhr (1891b, p. 1043) is quoted:

"The outbreak of trichinosis on board the bark *Nixe*, of Bremen, in the harbor of Iquique, was described in certain political newspapers as if the people in question were taken sick as a result of eating North American cured pork, the importation of which into the German Empire is still forbidden on hygienically unsupportable grounds. The *Weserzeitung* has already rightly questioned whether it was not fresh meat from a hog slaughtered in Iquique, rather than cured pork from North America. Thus the erroneous conclusions drawn by persons not expert in this line, or by prejudiced parties, to the good of the present prohibition of North American cured pork, fall.

"As an important hygienic question in regard to the feeding of the masses is here concerned, an authentic account of the outbreak, based upon the report of the captain of the *Nixe* to owners of the ship, does not seem out of place. Dr. Pauli, member of the board of health of Bremen, consulted that report, with the permission of the owners, and permits me to publish the following facts from it. On the 2d of May the ship's cook purchased a piece of *fresh (Chile)* pork in the market of Iquique; the boat was lying off the city. Before this pork was prepared for dinner on the 4th the cook gave the crew for breakfast some of this fresh scraped meat, with salt and pepper. The captain himself, as well as four sailors who were ashore on leave in the morning, did not eat of this breakfast; all the rest of the crew partook of it. First, the head wheelman became very sick. The physicians in the beginning could not make any definite diagnosis, but the rapid succession of a number of similar cases gave a clue, and in an excised piece of muscle fresh trichinae were found. At the posting of the last letter from the captain from Iquique none of the patients had died, but the condition of the head wheelman was such that there was some doubt in regard to his recovery, and 13 members of the crew had to be left behind as very sick.

"Accordingly the unfortunate event has absolutely not the slightest thing to do with North American cured pork. On the contrary, this is only another proof that raw scraped pork should never be eaten, a depraved habit which is unknown to other nations, but which it does not seem possible to eradicate from Germany, in spite of all unfortunate experiences."¹

¹ "Der Ausbruch der Trichinose an Bord der Bremen Bark "*Nixe*" in Hafen von Iquique ist von einzelnen politischen Zeitungen so dargestellt worden, als ob die betreffenden Personen infolge Genusses gepökelten nordamerikanischen Schweinefleisches erkrankt wären, dessen Einfuhr in das Deutsche Reich aus hygienisch unhaltbaren Gründen noch immer verboten ist. Die "*Weserzeitung*" hat bereits den Thatbestand dahin richtig gestellt, dass es sich nicht um Schweinefleisch jener Art, sondern um *frisches* Fleisch von einem in Iquique geschlachteten Schweine gehandelt hat. Damit sind die von nicht sachverständigen oder voreingenommenen Berichterstatlern zu Gunsten des bestehenden Einfuhrverbots für nordamerikanisches gepökeltes Schweinefleisch gezogenen schiefen Folgerungen hinfällig geworden.

"Da es sich jedoch um eine für die Volksernährung in Deutschland wichtige *hygienische Tagesfrage* handelt, erscheint eine authentische Darstellung jenes Vorfalles nicht überflüssig, welche sich auf Berichte des Capitäns der "*Nixe*" an seine Rheder gründet. Mein geehrter College, Herr Dr. Pauli, Mitglied des Gesundheitsraths von Bremen, hat jene Berichte mit Erlaubniss der Reeder eingesehen, und mir gestattet, aus denselben folgendes mitzutheilen: Am 2. Mai kaufte der Koch des vor Iquique liegenden Schiffs auf dem Markte daselbst ein Stück frisches Schweinefleisch (also chilenisches)! Bevor dasselbe am 4. zum Mittagmahle bereitet wurde, gab er der

Mecklenburg, Germany, 1897..... ? case, ? death.

One of the most anti-American political daily papers in Berlin referred to some cases of trichinosis in Mecklenburg which were alleged to be due to American meat. Unable to learn the locality of this outbreak from any published records or from any of my scientific or medical friends in Berlin, I called in person on the editor of the paper in question. Sending in my name to the editorial sanctum, with word that I desired to trespass upon the editor's time but a moment and to take advantage of his courtesy to the extent of inquiring where I could learn the name of the town in which the outbreak took place in order that I might investigate it, I received a very brusque reply through one of the office servants to the effect that if I desired any information from that office, it would be necessary to apply in writing. The reception I received was such a marked contrast to the exceedingly courteous treatment I have always enjoyed in Germany when investigating the subject of trichinosis, that I did not follow the matter further. The original newspaper report read: "Last year cases of trichinosis were established in Mecklenburg after the consumption of American meats."¹ This statement can hardly be taken as anything more or less than a part of the anti-American policy followed by certain German papers, and can not therefore be considered seriously, especially in view of the fact that the same newspaper stated a few months later: "It is true that of the 688 cases of trichinosis (1892-1898), none of them could be traced to American pork."²

Mannschaft zum Frühstück von diesem Fleische *frischgeschabt* mit Salz und Pfeffer. Der Capitän selbst ass nicht von diesem Frühstück, auch nicht 4 Matrosen, welche am Morgen an das Land beurlaubt worden waren; alle übrigen 17 Mann aber genossen davon. Darauf erkrankte zuerst der Ober-Steuermann, und zwar sehr schwer. Die Aerzte konnten anfangs keine bestimmte Diagnose stellen; erst das rasche Nachfolgen vieler ähnlicher Fälle leitete sie auf die richtige Spur, und in einem ausgeschnittenen Muskelstückchen fand man frische Trichinen. Bei Abgang des letzten Briefes des Capitäns aus Iquique war noch keiner der Kranken gestorben, das Befinden des Ober-Steuermanns aber war der Art, dass man an seinem Aufkommen zweifelte, und 13 Personen der Schiffsbesatzung mussten als schwer Kranke zurückgelassen werden.

"Mit gepökelten nordamerikanischem Schweinefleisch hat also der bedauernswerthe Vorfall nicht das mindeste zu thun. Vielmehr folgt aus demselben nur von neuem, dass man niemals rohes, geschabtes Schweinefleisch geniessen soll—eine Unsitte, welche anderen Nationen unbekannt, im deutschen Volke aber trotz vieler übler Erfahrungen, wie es scheint, nicht auszurotten ist."

¹"Erst im vorigen Jahre sind in Mecklenburg Fälle von Erkrankungen an Trichinosis nach dem Genusse amerikanischer Fleischwaren festgestellt worden."—*Deutsche Tageszeitung*, July 11, 1898.

²"Richtig ist, dass von den 688 Trichinenfällen Keiner hat auf amerikanisches Schweinefleisch zurückgeführt werden können."—*Deutsche Tageszeitung*, October 25, 1898.

Oberplanitz, Saxony, 1898..... 1 case, 0 death.

One of the most rabid anti-American papers of Germany referred to a case in Oberplanitz which "might have been due to American pork." Not the slightest evidence was submitted in support of this assertion, which, because of the tendency, spirit, and tone of the paper, is scarcely worthy of citation.

Allg. Fl. Z., 1898, June 16, No. 48, p. 2: "Der Gemeindevorstand von Ober-Planitz theilt uns über die aus Planitz gemeldeten Erkrankungen an Trichinosis mit, dass die von den Aerzten behauptete Trichinosis nur auf gewisse Krankheitserscheinungen der Patienten zurückgeführt wird, dass aber weder durch die Seitens der königl. Staatsanwaltschaft hierüber vorgenommenen Erörterungen die Behauptung bestätigt worden ist, noch dass in der konfiszierten Fleischwaare oder in dem einer erkrankten Person entnommenen Fleischtheile Trichinen vorgefunden werden sind."—Allg. Fl. Z., 1898, July 7, No. 54, p. 1. Beilage: "Die hier aufgetretene Massenerkrankung, die anfänglich für Trichinose gehalten wurde, ist jetzt erloschen. Es waren achtunddreissig Personen erkrankt, von denen zwei gestorben sind. Der Character der Krankheit hat amtlich noch nicht festgestellt werden können."—Der Trichinenschauer, 1898, (X) 14, July 15, p. 109: "Zur Trichinose in Planitz ist noch zu registriren, dass der Fleischer Meinhold, aus dessen Geschäft die Fleischwaaren stammten, deren Genuss die Krankheit verursachte, in Haft genommen worden ist und zwar, weil der Verdacht, dass das Schwein blind geschlachtet worden, sich bestätigt hat. Alle Erkrankte sind wieder gesund, was in folgedessen nicht auf Trichinose schliessen lässt. Es wird sich hier um eine gewöhnliche Fleischvergiftung handeln. Die Trichinen der verstorbenen Frau Becher dürften auf amerikanische Fleischwaaren zurücksuführen sein. Denn nach den massenhaft gefundenen Trichinen an der Muskulatur der Frau B. müssten die andern Erkrankten doch ebensoviel Trichinen haben, mindestens soviel, dass die Erkrankungen weit schwerer sein müssten als sie in Wirklichkeit waren. Es ist ein unglücklicher Zufall, dass die Auffindung der Trichinen der Frau B. mit der Fleischvergiftung zusammen fiel. Die amtlichen Ermittlungen haben, wie uns mitgetheilt wird, ergeben, dass die Krankheit mit Ausnahme der Frau B. Trichinose nicht sein kann."—Leipziger Tagbl., July 27, 1898. Zwickau, July 26: Von officiöser Seite wird mitgetheilt, dass die vor Kurzem in Planitz vorgekommenen Massenerkrankungen nach dem Genusse von Schweinefleisch nicht auf den Genuss amerikanischer Fleischwaaren zurückzuführen sei, da sämtliche erkrankt gewesenen Personen nur vom Fleischer Meinhold ihre Waare gekauft hätten, dieser aber amerikanische Fleischwaaren nicht geführt habe.—Zeitschr. f. Fleisch. u. Milchhyg., 1898, VIII (10), July, p. 198: 80 cases, 1 death.

In connection with the outbreaks mentioned above, and in addition to the quotations already made, it may interest the reader to study two of the best known European articles upon the subject, one by Prof. Rudolf Virchow, of Berlin, the greatest living pathologist, the other by Dr. Bouley, one of the leading authorities in public sanitary matters in France.

AMERICAN TRICHINÆ.¹

I. The presence of trichinæ in hogs was first observed in North America. As I have stated in my short article (*Die Lehre von der Trichinen*, 3. ed., 1866, pp. 5, 36)

¹ Rudolf Virchow, 1884. Contributions to the Knowledge of Trichinosis and Actinomycosis in hogs. [Beiträge zur Kenntniss der Trichinosis und der Actinomycosis bei Schweinen.] Arch. f. path. Anat., etc., Berlin, XCV, pp. 534-547.

Joseph Leidy found them as early as 1847. That infection of human beings also had already occurred follows from the discoveries by the same author, as well as those by Bowdich, who once observed 50 parasites in a piece of human flesh measuring one-fourth of a square inch, and estimated from this 7,500,000 parasites for the entire body. (Samuel D. Gross, *Elements of Pathol. Anat.*, Phila., 1845, p. 216.) These observations on man, however, were upon recovered cases. Thus it happened that attention was not directed to this subject in America until after fresh trichinosis was noticed in Europe. In fact, the great frequency of trichinæ in American hogs was first established in Europe when we commenced here in Germany to inspect the importations.

It is not yet determined how widespread porcine trichinæ are in America. As far as I am aware, there is only one case known from South America, published in 1863 by Tüngel; a Hamburg ship in Valparaiso bought a hog, and a large number of the crew were taken sick on the voyage from eating the meat. However, where there was one trichinous hog, probably several will be found if looked for.

At the present time the fear that live trichinæ may be introduced from America has so increased that it has been decided to forbid the entry of American pork into Germany and France, and the question assumes more and more an international character. In agricultural journals it is even stated that numerous cases of disease have been noticed in our North German seaport towns following the use of American hams and even of bacon; Bremen, Hamburg, Lübeck, Rostock, and Königsberg have been mentioned in particular. In the session of the German Reichstag, on January 9, 1883, the Commissarius of the Bundesrath mentioned Düsseldorf, besides Bremen and Rostock.

Under these circumstances it seemed to me a duty to investigate the facts of the case more carefully, and to bring about a thorough discussion of the subject in scientific circles, even if, perhaps, no definite solution is reached. I applied for information to competent persons in all of the places named, sending them the following questions:

1. Have cases of trichinosis in man been diagnosed following the use of American hams, bacon, or other pork products?
2. Have live trichinæ been unquestionably observed in such articles?

The following was the result of these inquiries:

I. The only positive statements come from Bremen. Here the late Dr. G. W. Focke (*Berliner klin. Wochenschrift*, 1873, p. 191) reported that after the use of an American shoulder [ham], bought at auction, 12 persons were taken sick; later, after the use of other American hams, several other cases were observed, so that the total number ran over 20. He added that "investigation always showed numerous live trichinæ present" [in the pork]. The rapid smoking method had evidently killed the peripheral parasites, but near the bones the meat was raw and the parasites intact. The Gesundheitsrath (Referent Dr. Lorent) in his Fourth Annual Report on the Public Health, etc. (1877, p. 47), confirmed these statements, especially that the first case of trichinosis, observed in 1872, undoubtedly arose from American ham, "in which also numerous dead trichinæ were found."

According to the statements received by me from Dr. G. Strube, the parents, three sons, a maid, the cook, the shop girl, and a visiting relative, 9 persons in all in the family of a saddler, who had bought the shoulder in question at auction, were taken slightly ill in March, 1873, but none of them died. At the same time 2 other cases occurred in the practice of Dr. Göring. These followed the use of a salted ham which had afterwards been smoked in Bremen. These patients also soon recovered. In 1875 the inspection for the retail trade was made obligatory. Since this time there has been only one outbreak (1879) of trichinosis noticed as the result of eating American ham. The cases (a married couple and a servant) were diagnosed by Dr. Loose. Here also the cases were light, and recovered. Trichinosis following the consumption of American bacon or pickled meat had never been noticed.

According to a letter from Dr. Lorent, there were only 6 cases in the first outbreak. Otherwise he confirmed the statements of Dr. Strube, especially to the effect that no cases had occurred or come to notice in Bremen caused by bacon. Observations upon trichinosis among the sailors were conspicuous by their absence, although they eat a great deal of American pork and bacon, chiefly, it is true, when cooked.

It is to be very much regretted that the cases mentioned were not published in a more detailed and scientific manner, so that they could be submitted to serious criticism. Aside from the 3 cases in 1879 we are left to the statements of Dr. Focke, and although he was known to me personally as a scientifically educated physician, I can not help expressing my surprise that he remains the only one who not only found living trichinæ in American hams, but even found them "always present in large numbers." According to the official report cited the medical office in Bremerhaven in 1875 had urged an expert opinion of the Gesundheitsrath upon the facts claimed, "that trichinæ from salted American pork are not transmitted to other animals by feeding," but the Gesundheitsrath had cut short further discussion.

II. I will here state that the chandlers in Gütersloh (Westphalia), in a memorial of January 12, 1878, called attention to the fact that they had sent the pieces of American bacon and ham to Professor von Recklinghausen (Strasburg), with which he confirmed the harmlessness of the meat and the death of the trichinæ, both by microscopic examination and by feeding experiments. Other local investigators arrived at the same result.

This demonstration is evidently without value. If the trichinæ were dead, they could, of course, not multiply. But from this it does not follow that Dr. Focke was mistaken. Dr. Roper (1874, p. 280), on the other hand, was correct in drawing the conclusion from Dr. Focke's article, notwithstanding the fact that he himself had obtained negative results in Göttingen in feeding American sugar [-cured] hams, i. e., that utmost caution was demanded. However, he also was not able to bring forward any new facts in support of Dr. Focke's observations.

III. Dr. Engel-Reimers, of Hamburg, reported to me that live trichinæ had never been observed in the articles in question, and that all the feeding experiments with American materials carried on in the local anatomical department had resulted negatively.

Dr. Rudolf Krause writes me that the following was stated to him upon visiting the medical bureau of the state veterinarian, Professor Köhne:

1. "There has never been a case of trichinosis in Hamburg following the consumption of American bacon or ham. Two cases which have occurred in the past ten years were caused by home products."

2. "Live trichinæ have certainly never been observed. The experiments of feeding guinea pigs and rabbits with trichinous American pork, which failed in every instance, also speak against the parasites being alive, while all experiments with German trichinous bacon or ham have brought about infections. Consequently the pickling in America seems to destroy the vitality of the trichinæ."

* * * * *

These results are indeed worthy of attention, although they agree but slightly with what has been ascertained in all other places in regard to the presence of trichinæ in German hogs. That not a single hog should be trichinous among more than 40,000 examined in 1880-1882, seems simply incredible. Such a result, it appears to me, immediately demands a more rigid control of the inspection. I lay the more stress upon this point because it has been shown repeatedly that American hams which were free from trichinæ, according to the Hamburg stamp, have elsewhere been found to be trichinous. (Cf. Skrzeczka, 1882, p. 142.)

IV. Dr. Türk, the physicus of Lübeck, reports the following to me:

1. Trichinosis has not occurred in Lübeck following the consumption of American sides or hams.

2. During the past ten years the American sides and hams examined were found trichinous to the extent of nearly 10 per cent. Investigations as to whether the trichinae were to be looked upon as alive were not made.

V. I received the following answer from A. Petri, of Rostock, who has had long years of experience as a trichina inspector:

1. "American pork (bacon) has been examined here in Rostock to a considerable extent and a high percentage has been found trichinous; but all sides found trichinous have been confiscated by the police. This confiscation, however, extended only to such sides as were examined according to the law; for a municipal order states that only those sides need to be examined which are consumed here.

2. "As for the second question I can state with considerable safety, which you can in fact look upon as certainty, that not a case of trichinosis in man has occurred here for sixteen years. Only a single case, which at least wound up in Rostock, gave rise to the newspaper reports, and at that time I was questioned in regard to the matter by the police. The facts are as follows:

"In 1883 an outbreak of trichinosis occurred in a neighboring town, Tessin, and a number of people were taken sick. A soldier garrisoned in Rostock was in Tessin on a short leave of absence and became infected. As he was quite sick, and naturally the sickness did not develop until his return, the newspaper reports and the newspaper view that he had become infected in Rostock from eating American pork arose."

These are the facts of the case according to my best knowledge, and I can add that at that time a number of physicians were questioned by the police and they also denied the existence of trichinosis in man.

VI. Regierungs- and Medicinalrath Dr. Pincus writes me from Königsberg as follows:

"From personal experience I can only state that here in Stadtbezirk Königsberg not a single case of trichinosis has occurred from eating imported American pork, hams, pickled meat, bacon, etc., and that I have neither heard nor read that such cases have occurred in other places in the Regierungsbezirk Königsberg, or Gumbinnen. On the other hand, repeated cases have been established here, as elsewhere, from eating local pork. It is, however, unquestionably established that trichinae, whether living or dead I do not know, have been found repeatedly during the past four or five years in meats, hams, etc., which were imported here in wholesale lots from America and then sold in the city and province. The cases have on the whole, however, not been numerous. Here in Königsberg, so far as I know, trichinae have been found in American hams only once, when their presence was established by myself and by a druggist. The imported wares were said to have been inspected in Hamburg and to have been found free from trichinae, on which account they were sold in good faith both by the wholesale and retail dealers."

In regard to the matter often mentioned in the papers, in which the members of the office of administration of the Königsberg merchants were involved, in so far as they were twice punished by the court for selling American bacon containing trichinae, Professor Möller learned the following:

"The case occurred in 1879. Hams alone were not involved, but chiefly sides of bacon imported direct from America. In the thin muscles trichinae were found, once in Pr. Holland, where the local veterinarian, Schmidt, made the examination, and a second time in Kreis Heydekrug, where the inspector could not be ascertained. Not a single case of disease occurred. The chandlers have since that time required a microscopic examination of their imported wares, and up to the time of the prohibitory decree had them made by Druggist Seydler, an educated and competent man. Seydler stated to me that he had several times found trichinae in the muscular layers of the sides of bacon, in which he had noticed perceptible movements upon gently heating the object over an alcohol lamp. He made no ingestion experiments. Seydler

thought that the sides of bacon were placed in brine but a short time in America, so that this, on account of the thickness of the sides—some sides measure up to 18 cm. in thickness—could not penetrate all the way through. In packing, salt is also placed between the sides, but would probably affect only the surface.”

Here we meet again for the first time a statement in regard to movements of the trichinae. Warming the object over an alcohol lamp is hardly a method to be recommended. By this method one can also occasionally notice a movement of dead muscle fibers. Upon this case I should like to base the warning that everywhere that trichinae inspection is instituted there should be a provision for a second higher control. In addition, considering the importance which the Reichskanzler attached to this case, it would not be without value to know the grounds for the decision of the court.

VII. From personal experience I can give only negative statements for Berlin. Regierungs- and Medicinalrath Dr. Pistor writes me as follows:

“After looking through the records as far back as 1872, in which, as is known, the first advice regarding the importation of large quantities of American hams and sides was made public, I can only state that according to the statements at hand no cases of trichinosis in man have resulted from eating American pork. I feel it necessary to add, however, that the records give only an uncertain ground for statements in so far that in many reported cases of sickness the origin of the pork consumed could not be established with certainty.

“In regard to the occurrences from 1879 to 1881, negative statements are found in both of the general reports on sanitary affairs in Berlin for 1879–1880, and 1881, pages 143 and 118, respectively.”

VIII. In the early part of 1881, sixteen cases of trichinosis, of which three were fatal, occurred in Düsseldorf, all resulting from the consumption of raw ham. The ham in question was designated by the merchant as a “Holsteiner,” under which name they are sold from Hamburg. A definite decision regarding this point could not be obtained. The fact that the ham was extremely small does not speak in favor of its being an American importation, although suspicion existed that the dealer at that time imported American hams via Antwerp. Nevertheless this was so uncertain that the Government also took into consideration the possibility that this ham might have come from an American hog imported alive, as such were imported in large numbers in 1880. Enough; it could not be ascertained where the ham came from, in spite of all inquiry.

When these data¹ are reviewed it must be admitted that they are very scanty in comparison with the immense importations from America. For, aside from the trichinae in which movements were noticed upon being heated over the alcohol lamp by the Königsberg inspector, live trichinae have been found in American products only by Dr. Focke, of Bremen, but, so far as I have been able to learn, by no other observer. And yet the trichina inspection did not really begin to any considerable extent until after 1873 (or 1872), when Dr. Focke made his observations, and since then it has developed to such a degree that, according to the statistics of Geh. Med.-Rath Dr. Eulenberg, 3,808,142 hogs were inspected in Prussia alone in 1882. The more practiced the inspectors become and the more carefully they are controlled, the less have they found live trichinae in American meat.

It is further certain that no epidemics of trichinosis have been caused in Germany by American meats. The greatest number of cases at any one time still remains that

¹According to an extensive note in the *Fleischer-Zeitung* of February 12, 1884, No. 7, feeding experiments with heavily infected American smoked and salted pork have been carried on in the Holland Government Veterinary School since 1882, which, according to the *Nederl. Staatscourant*, are published in the *Landbouw-Courant* of January 24 of this year. All of these experiments were negative.

given in the first outbreak observed by Dr. Focke in Bremen, whether one wishes to estimate it at 12 or only 9 or even as low as 6. In all other places absolutely no cases have been observed after the consumption of American meat, and still less after using bacon. Where anything of this kind has been assumed in the heat of the discussion, with the exception of Bremen, the assumption has not been confirmed.

Science and administration accordingly find themselves in the peculiar forced position of being obliged to accept the statements of one, or at most, of three physicians in Bremen as assumptions for their further conclusions. The scientific deputation for the medical affairs in Prussia submitted to this necessity when upon April 24, 1878, it rendered an opinion in regard to the petition of the chandlers of Gütersloh, which demanded that the microscopic inspection of the American sides should be discontinued as unnecessary; the deputation insisted rather that this inspection should be continued strictly and with increased control, and the Royal Government adopted this opinion. As is to be seen from the annual report of Dr. Eulenberg, 51,427 American sides were examined in 1881 in Regierungsbezirk Minden alone, but not a case of disease was noticed after their consumption. Had the prohibition of importation not been issued the microscopic inspection of the imported meat, even where it is not obligatory, would surely have been just as completely organized as it has become necessary to organize it for the inspection of the home product.

However, I desire to remark that the importance of the Bremen observations can not remain the same for all eternity. If the prohibitory decree had not been issued it would have been shown in a few years whether in fact the danger is so great as must appear from the reports of the Bremen physicians. Probably the protective inspection would not have been discontinued at all even if the widespread fear had been proved unfounded, for even without every proof the possibility that live trichinæ might be imported must be admitted, and no one will begrudge the slight increase in expense. This holds in exactly the same manner for the Eastern importation.

With this I close. A further discussion beyond the limits of medical, and especially hygienic, competence is not intended here. I hope that the data given may serve as a starting point for a still more exact examination of the facts. The practical conclusion will then be drawn.

REPORT ON THE IMPORTATION OF SALTED PORK OF AMERICAN ORIGIN.¹

GENTLEMEN: The consulting committee on public hygiene is again called upon to express its opinion upon the important question as to whether the importation of American pork should continue to be forbidden in France for fear of the dangers of trichinosis. In order to reply to this question it is necessary for us to consider what experience has taught us concerning the reality and the gravity of these dangers.

In former reports it has already been established that in spite of the free entry of American meats into France and the extensive consumption of the same by our population both in the cities and in the country, as well as in the army, trichinosis has not become a French disease; and this fortunate immunity we have always attributed to the general custom existing in France of not eating pork until it has been submitted to a temperature in cooking which thoroughly penetrates it and which the trichinæ can not withstand.

This is what is formally expressed in the report addressed in the name of the committee to the minister of agriculture and commerce on August 4, 1879:

"Experience having demonstrated," it is stated in the conclusions of the report,

¹Bouley, 1884. Rapport sur l'importation des viandes de porc salées de provenance américaine. < Rec. d. Trav. d. Comité Consultative d'Hygiène Publique de France, XIII, pp. 390-401. Meeting of November 26, 1883.

"that thanks to our culinary habits the dangers of trichinosis are almost nil in our country, the committee is of the opinion that there is no occasion, at present at least, to resort to prohibitory measures which would deprive the population of a very important article of food."

On September 6, 1880, this committee, upon again being consulted on the occasion of the prohibition which had just been decreed in Germany against the American dressed pork, replied that "cooking to the degree customary in France constituted for our population a protection much more efficacious than the inspection of pork carried out in Germany, and that consequently there was no occasion to imitate Germany in the measures which that country had just adopted in regard to dressed pork of American origin."

In 1881 the finding of trichinæ in American meats at Lyons by means of microscopic inspection caused considerable anxiety in public opinion.

This committee was charged by the minister of agriculture and commerce with the question as to measures to be taken in regard to American meats.

In the report which the committee addressed to the minister February 7, 1882, the immunity of our people from trichinosis was again mentioned and accounted for, namely, by the custom among all classes of thoroughly cooking the pork they used.

This report said: "If trichinæ are found oftener to-day than formerly in imported meats, it is not because they have become more frequent, but because the inspection has become more perfect, since it is to-day confided to men who are experienced in the use of the microscope."

The report therefore established that we do not find ourselves menaced to-day by any greater danger than in the past, and it expressed the opinion that one should refrain from resorting to prohibitory measures which are not justified. At the same time, making a concession to the public excitement, the committee believed it should advise a careful inspection of American meats at the ports of entry, without, however, expressing itself in regard to the nature of this inspection. The object of this, in the minds of the authors of the report, was, first, to show that vigilance was being exercised at the place of the danger to which, in the fright of the first moment, excessive proportions had been ascribed, and, further, to induce the American importers, by threatening their interests, to take measures to prevent the shipment to our ports of meat infested with trichinæ.

In spite of this concession, this committee remained faithful to its doctrine that the importation of American meat into France ought not to be forbidden because of any fear of trichinosis, since our people are protected, by their culinary customs, against the dangers which might result from the use of trichinous meat when such meat is consumed raw or insufficiently cooked.

January 5, 1882, this committee addressed a new report to the minister covering the question which he had again submitted, i. e., whether the prohibitory decree against American pork, which had been in effect since February, 1881, could be repealed without danger to the public health.

This committee stated in this report that nothing new had occurred since its report of 1881 which caused it to alter its opinion regarding the chief reason for immunity from trichinosis among the French people due to their custom of eating pork only after having submitted it to a thorough cooking, and it declared itself distinctly against the maintenance of the prohibition, basing its action in this, first, upon the fact that before the prohibitory decree of February, 1881, trichinosis had not been found in this country, although American meats had been imported and placed on the market without control, especially in the large working centers and in the army, where trichinous infection would not have failed to be recognized if it had manifested itself.

Furthermore, the committee in its report laid great stress upon the important consideration that American meats were submitted to a salting which, although without

doubt it did not give an absolute guaranty against the dangers of trichinosis, certainly reduced them in a very great measure. Experiment has proved, in fact, that fresh trichinous meat, in which all the trichinæ are living and in full possession of all their activity, is very much more dangerous than salted trichinous meat in which the curing has killed the parasites, the more in number in proportion to its completeness and its age. Experiment demonstrates also that those parasites which are found still living in fully cured meats are far from possessing the reproducing powers of the living trichinæ which are contained in cysts in fresh meat.

This question regarding the freedom of the importation of salted American meats, already submitted four times to this committee, is again referred to us for consideration.

The committee can only remain faithful to its first decisions, supporting them both by the former arguments which were given in our first reports and by new documents which have been collected in countries where the importation of American meats has remained unhampered, as was the case in France before the prohibitory decree of 1881.

It was important to know whether in these countries the frequency of cases of trichinosis in man has been found proportionate to the consumption of American pork.

Following are the statements in regard to this point which have been given to us by competent men whom we have addressed upon the subject:

The first emanates from Mr. Fleming, veterinarian in chief of the English army, and author of well-known works upon the contagious diseases of domesticated animals and upon sanitary police:

"Trichinosis," writes Mr. Fleming to the chairman of our committee, "is, to tell the truth, a very rare disease in England, for our medical journals make no mention of it. I may say that it is almost unknown.

"There is here no prohibition of the importation of American-cured pork, for the authorities would not be able to find any grounds for forbidding the entry of an article which occupies an important place in the list of substances destined for public alimentation.

"Although trichinosis, or rather the trichina, was first discovered in this country, we can refer to only two outbreaks of this disease.

"I ought to state, however, that in England pork is never eaten raw; it is always cooked."

Dr. Wehenkel, director of the state veterinary school at Brussels, sent the following information to us on this subject: "I hasten to inform you that trichinosis in man, if it exists at all in Belgium, must be very rare. Up to the present time I have no knowledge of any case of this disease in this country, either in human or veterinary practice, with the exception of the cases of experimental infection.

"Trichinæ have, however, occasionally been found, but thus far only in American bacon; and the experiments which have been made to transmit these trichinæ experimentally have thus far given us only negative results."

Thus, in Belgium as in England, where the importation of American-cured pork is allowed and forms an important part of the food of the public, trichinosis in man remains a disease of extreme rarity, for no professional journal mentions it, either in the army or in the civil population. It would be entirely different, it may be asserted, if trichinosis without being a frequent disease was revealed here and there by a few cases. Let us recall what happened when Rayer discovered the communicability of glanders from the horse to man. When the physicians were once acquainted with the reality of this fact, they saw what had escaped their predecessors and themselves, and the observations of cases of glanders multiplied. It would surely be the same with trichinosis if it were found, even in isolated cases, in hospitals or in private practice. The attention of the physicians is too much

awakened upon this point, to allow all the cases of this kind to pass under their eyes unrecognized.

Consequently, trichinosis in man may be considered as unknown in Belgium and in England, in spite of the extensive consumption there of American-cured pork. But trichinosis is relatively frequent in Germany, and from time to time we see it appear as a sort of an epidemic, in the sense that in localities, even in districts, it at the same time attacks a certain number of persons who have manifestly been infected from a common source. Does there really exist an actual relation between these cases and the consumption of American pork by the people? The prohibitory measures against pork which took effect a few months ago in the German Empire seem to indicate that such is indeed the idea of the Government of that country; but the information which has come to us by the letter which I am about to read to the committee shows that there can indeed be other motives for the prohibition than the interest of the public health. Here is the information:

"At the time of the discussion of the proposal of prohibition in the Bundesrath the Government commissioner was obliged to admit, upon being questioned by the representative from Hamburg and in general of the Hanseatic towns, that only three times had trichinosis been communicated to man by American pork: In 1871, at Rostock; ¹ in 1872, at Bremen; ¹ in 1881, at Düsseldorf.¹ Since then the Cologne case¹ in 1883 has occurred. In the immense majority of cases trichinosis in man in Germany is due to indigenous pork.

"If Germany has taken this measure against American pork, it is less the question of public hygiene which has been brought forward than the intention to favor certain breeders in northern Germany who were the originators of the proposition. The sanitary police has again served as the flag for the prohibitionists. The high personalities of Germany, the legislators from the north, are all extensive agriculturists who suffer from American competition. The hopes which they had based upon the prohibitory measure which they have obtained have been frustrated, for hogs from the Danube provinces are now entering into competition with the German production on the German markets.

"It has not escaped anyone that the prohibition of American meat was only a pretext. This has recently been admitted at the International Veterinary Congress at Brussels by some of its most competent members."

We will add to these statements those which M. Zündel, veterinarian in chief of Alsace-Lorraine, published in the *Recueil de Médecine* last March.

"Trichinosis," M. Zündel says, in this article, "is frequent in the north of Germany, and one involuntarily asks himself if Germany really has a right to accuse America of furnishing so many trichinous hogs."

"The trichinous meats of America have at least the advantage of only very rarely communicating the parasitic infection, because the trichinæ are killed in the majority of cases by the preparation to which the meat is subjected at Chicago or Cincinnati, while such is not the case with the pork one is called upon to eat in north Germany, and which, following the customs of the country, is offered to you only imperfectly cooked. Although at the time of the recent discussions in the German Bundesrath, the Government commissioner was able to cite only three cases of trichinous infection in Germany due to the consumption of American pork, he could have cited by thousands cases occurring during the same period of time from indigenous trichinous hogs and almost by hundreds the number of cases of death which this infection occasioned.

¹See pp. 156, 157 of present report.

"The following are the statistics of trichinosis observed in hogs in Prussia for six years, taken from the official reports of Dr. Eulenberg:

Year.	Hogs inspected.	Found trichinous.
1876.....	1,728,595	800
1877.....	2,857,272	701
1878.....	2,524,105	1,222
1879.....	3,213,155	1,975
1880.....	3,342,303	2,284
1881.....	3,118,780	1,695

"Which gives a total of 8,677 trichinous hogs in 16,784,210, or 1:1,934.

"To find these trichinous hogs, an army of microscopist inspectors was necessary, the number of which increased from 12,000 in 1876 to 18,581 in 1881. In spite of this the number of published cases of trichinosis in man has been considerable; i. e.—

Cases.	Cases.
1876..... 358	1879..... 400
1877..... 356	1880..... 200
1878..... 488	1881..... 238

or 2,040 cases in six years, an average of 340 cases per annum, with a total of 84 deaths, or an average of 14 deaths per annum.

"The following figures give the extent of occurrence of trichinæ in pieces of pork of American origin:

Locality.	Pieces examined.	Found trichinous.	Per cent.
Kiel, 1880.....	1,229	29	2.36
Stettin.....	41,364	468	1 +
Hamburg.....	78,597	836	1 +
Altona.....	10,352	178	1
Minden, 1879.....	50,000	243	.40
Cologne.....	1,760	15	.80

"The proportion of infected pieces in the American importations given in these statistics is certainly not peculiar to Germany. It must evidently be the same in the pork of the same origin imported into England, Belgium, and France. But notwithstanding this we do not find that trichinosis in man has manifested itself in these latter countries to such an extent that the physicians should at least make mention of it in their lectures, and in many and varied accounts with which the medical journals are filled."

Whence this immunity? Evidently from the culinary customs. Given the same conditions of trichinous infection, the chances of producing effect will be greater in the same proportion that the meat is less cooked, as is the case in Germany.

But, if the statistics do give in Germany the trichinous infection of American meat in the proportion stated above, on the other hand only four times can be cited in which trichinosis in man can [has been able to] be traced to the use of this meat; from which it must be inferred that the trichinæ which the meat conceals are rendered inoffensive in the greater number of cases, thanks to the curing, even when the meat is eaten raw or slightly cooked, "according to the customs of the country," as Zündel has stated in his article.

It is therefore not to the American-cured pork that this trichinosis in man should be ascribed, which, according to the official reports, reaches in Prussia an annual average of 340 cases and 14 deaths.

All the trouble comes from home production. As a result one can truly say that from the hygienic standpoint the prohibition of American meats (in Germany) rather had for its object to force the people to use exclusively home-production meats, which are much more dangerous than salted meats, because the trichinæ which they conceal are in possession of all their reproductive powers.

It is now necessary to examine the question whether the prohibitory measure which closed the French ports to the *direct* importation of American pork has had the result which was anticipated, i. e., to prevent the consumption of these salted meats from America from which infection was feared. One condition was lacking in order to make this measure absolutely efficacious in this respect, and completely corresponded to the intentions which led to its adoption, i. e., to apply it to the pork of all countries, on all our frontiers, both land and sea. But our ports, as our land frontiers, having remained open to importations from England and Belgium, a great amount of American bacon has only to change its name in order to be admitted into France and be consumed here. In fact, among the meats supposed to be English which enter the port of Bordeaux a certain quantity is of American origin; and the same holds for Belgian bacon; with the result that the prohibitory measure has caused the loss to our merchant marine of the benefit of the extensive commerce which accrued from America, while the public health has not received from it the protection which was expected. And, finally, as the use of American-cured pork has been able to continue in France to quite a considerable extent in spite of the prohibition against it without having caused any of the inconveniences which people thought they had to fear, this fact should be used as a new argument to show that the prohibition ought not to be maintained, since it is eluded on quite a great scale, and only has as a final result a considerable loss for our merchant marine.

The committee should now examine the precautionary measures which should be taken if the prohibitory decree is repealed and American pork enters into French consumption as was the case prior to 1881.

The microscopic inspection is utterly impossible. One can conceive of its rigorous application on entire animals, or on halves, for the trichinæ have certain places of predilection where they are encountered quite constantly in infected animals; so that if they are not present in the muscles for which they have a preference, it may be legitimately inferred that they are not present in the other muscles. But the boxes of salted meat exported from America contain parts of several animals, and under such conditions the examination of one does not indicate anything, either good or evil, as to the condition of the others. Hence the necessity, which is an impossibility, to submit to a microscopic inspection not only all of the pieces, but the different parts of the same piece. Technically this is not possible; on the other hand, it would lead to such expense in unpacking the pieces and repacking them in alternate layers of meat and salt that to prescribe this could be considered as equivalent to the maintenance of the prohibition, as it would not be accepted by the trade.

The committee believes all the more that it should not advise this, since, after all, the microscopic inspection would not be complete, and consequently it would leave chances that trichinous meat would be put on the market. Witness the epidemics of trichinosis in man which we see break out from time to time in Germany in spite of the army of 18,000 inspectors whose duty it is to find and condemn trichinous meat.

Although the microscopic inspection applied to millions of kilograms is not possible, there is another much more practicable inspection which can be recommended, i. e., to determine whether the pork sent from America is perfectly salted—"fully cured," as expressed by the Americans.

This condition gives a guarantee which is not illusory, for the experience of all countries testifies with one accord that the dangers of trichinous infection for man are much less when cured pork is used for food than when fresh pork is consumed,

the same culinary conditions being assumed for the two cases. Curing, therefore, renders the meat wholesome, either by killing the trichinæ, as is generally the case, or by greatly reducing the reproductive power of those parasites which withstand its action for a longer or shorter time.¹

It is therefore necessary that imported meats should fulfill the condition of good conservation and perfect salting, as expressed in the technical language of the American trade by the expression "fully cured," a peculiar condition characterized by the grayish exterior, firmness to the touch, and the odor of walnut, which is noticed upon sounding. This condition can be easily ascertained by the municipal meat inspectors already employed in most cities in France. Severity in this particular inspection of the salted meats would furthermore result in placing the foreign shippers on their guard against the losses which would not fail to occur from the nonadmission to our markets of cargoes of meat not fully cured.

But although complete curing gives to the consumer of American pork a very good guaranty against the dangers of trichinous infection, even when this meat is eaten raw, this committee believes it ought to repeat that the immunity from trichinosis which our people enjoy over the Germans is chiefly due to the custom of not eating pork of any origin whatever except after it has been thoroughly cooked.

The action of cold has also been spoken of as a method of making trichinous pork wholesome. In fact, the laboratory experiments made in France have demonstrated that in salted meat the trichinæ do not resist a temperature of minus 10° C. On the other hand, competent experimenters in Germany claim to have found living trichinæ in fresh hams which had been exposed one night in winter, and even for three days, to a temperature of minus 18° to minus 20° R.

New experiments should therefore be made to solve this interesting question of the action of cold as a means of rendering trichinous meat wholesome.²

The consulting committee on public hygiene in France believes it necessary to again give the advice "that the importation of salted meats of American origin can become free as it was before the decree of February 18, 1881."

¹The experiments made in Germany by Küchenmeister, in common with Haubner and Leisering, prove that the trichinæ are killed by prolonged salting. (Haubner, Küchenmeister, and Leisering. *Helminthologische Versuche*. Dresden, 1863.)

²In the experiments of the Museum Laboratory of Comparative Pathology, the death of the trichinæ was recognized by the staining of their bodies when they ceased to live, while living trichinæ were not stained. This is an important differential character in determining the degree of danger of meats in which trichinæ have been found.

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